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ORIGINAL ARTICLES.

SOME MISTAKES (?) OF HAHNEMANN.

BY ROBERT N. TOOKER, M. D., CHICAGO, ILL.

AT the last semi-annual meeting of the New York State Hom. Med. Society a paper was read entitled "Some Therapeutic Principles Now and Previously Held by the New School of Medicine, which are Unsound."*

The paper closed with a series of resolutions, which on being submitted to a vote were, as we think, very properly tabled. The paper, however, now that it has been published, is open to discussion, and it is worthy of more than passing notice because it is a very clever statement of the position held by those who are skeptical regarding our School of Medicine or only half believe its tenets. The author is evidently a man of thought and culture. His introductory lines are full of epigrams and aphorisms. He shows us in brief phrases the folly of offering sacrifices to wooden idols and he leads us to infer that, however dearly cherished they may be, all our dolls are stuffed with saw-dust. He then gives us to understand that to be wise and consistent we should straightway empty out the saw-dust, either by punching out the eyes, or tearing off the legs, or by some other process, amounting to mutilation or destruction.

Hippocrates, Galen, Paracelsus and Brown and all of the other great medical luminaries have shone brightly for a season and then their light has turned to darkness. Many modern theories are found to be untenable because untrue, or need constant revision because only half true. For example: extirpation of the ovaries is not always and necessarily followed by sterility; air in the veins does not always cause immediate death. Ergo, the modern teaching of physiology is erroneous or at least defective. Even the Bible has been several times revised; and now the Presbyterian Church is overhauling Calvin and his creed.

As this species of iconoclasm is getting to be so general, our author wonders why we do not take the "Organon" and its author and give both the benefit of a thorough shaking up. So long as all our other idols are found to be hollow and delusive why spare this one? We are called upon to

"officially cast off some of our false therapeutic principles" and revise our faith as well as our work.

Hahnemann, he concedes, was a careful observer, but—he was not infallible. He taught immortal truth, but the clothes wherewith it was once clothed are now tattered and threadbare, and in this new era of light and knowledge "should be discarded as rags." These rags are itemized in the series of resolutions to which I have before referred, and which read as follows:

"Resolved, That in the opinion of this society the theory of potentiation of drugs, as taught by Hahnemann in the 'Organon' and in his other writings, that is, the doctrine that the more drugs are attenuated by successive trituration, or the more they are diluted and succussed, the more their power and effectiveness is increased, is hereby declared unsound and unreasonable in principle, except the fact that division of drug matter is accomplished.

"Resolved, That all symptoms attributed to provings with high potencies are of doubtful reliability, and therefore they are not trustworthy guides in practice.

"Resolved, That, in the opinion of this society, the theory of the psoric origin of chronic diseases, as set forth by Hahnemann in the 'Organon' and in his other writings, is erroneous, and, therefore, as a basis for treatment, it is misleading."

Let us consider these resolutions in reverse order.

The psoric origin of chronic diseases, as a theory, was not original with Hahnemann, and in some respects it is inconsistent with his more essential teachings. Even if it were original with him it would not be discreditable. It has not yet been displaced by another more worthy or more helpful. It has quite as much to recommend it as the germ theory. It is far less complicated and has fewer inherent inconsistencies.

Take the psoric theory at its worst; pass it through a half dozen German crucibles; boil it; bake it; freeze it, and toy with it; whisper about it for a few years; then send it over to France and have it covered over with French polish; put it under a binocular microscope; stamp it with some newly invented hieroglyphics and the medical world will go crazy over it. In due time some royal cretin will command all of his medical attendants to adopt it; will endow hospitals and colleges to teach and propagate it, and confer emoluments and decorations upon those who best

* By W. M. Decker, M. D., Kingston, New York. Published in November number of New York Medical Times.

succeed in befuddling the doctrine and rendering it incomprehensible to the average understanding.

But the psoric theory is not now and never was a part of homœopathy. It has no essential or vital relation to the New School of medicine.

Discard it if you please, or retain it if you will. We have no objection to either course.

The second resolution is only worthy of consideration because Hahnemann in his dotage and some of his disciples in their early enthusiasm believed it and taught it. As the great majority of the followers of Hahnemann, however, at the present day, have seen its fallacy and have already discarded it, there seems to be no special harm in giving it official and respectful burial in the resolution as formulated. Let it be properly entombed and plainly labeled in the language which Hahnemann was so familiar with—"resquiescat in pace."

It is with the first resolution—in their regular order—that we desire to take issue, for herein lies the pith, the kernel, the spirit of homœopathy. The doctrine of the attenuation or dynamization of drugs by which they are rendered more efficient as medicines, as promulgated by Hahnemann, and believed in by his followers, is one of the fundamental and essential parts of homœopathy. It is this that gives it individuality, makes it *sui generis*, and differentiates it from all other systems and dogmas. That trituration and dilution have been carried to extremes by fanatics is admitted; that there is a limit to these processes beyond which it is folly to go with any expectation of curative results is freely confessed.

It is conceded that a point is reached in dilution—variable or varying, according to the drug, when credulity alone would warrant its employment as a medicine. But that the various dilutions have a therapeutic action, distinct from, and in many drugs at variance with, those same drugs in a crude form, is a fact so well established, so generally admitted by all schools of medicine, that it seems like folly to elaborate or illustrate it. The most prominent and widely known of Old School authors, teachers and practitioners, are those who most distinctly and clearly recognize and utilize this truth; and their prominence as teachers, authors and practitioners is in direct ratio of such recognition.

As a medical dogma, it is no longer exclusively ours. It has been appropriated by others to such an extent that it has almost lost its pedigree. Only those of its own household know its parentage. It matters not that the doctrine of attenuation has been abused and misunderstood. It is not its fault that it has often been carried to the point of absurdity.

In spite of this, it has withstood the abuse, ridicule and calumny of nearly a hundred years, and will continue to stand for ages to come. Stripped of sophistry and verbiage, the doctrine of attenua-

tion is simply the division of drug substance and the breaking up of its atoms or particles to such an extent that its essential characteristics are brought out and developed.

Every drug has its own individuality. It differs from every other drug, in smell, in taste, in form; and it differs in its effects upon the human body whether in health or disease. The object of attenuation, whether by trituration or dilution, is to bring out and develop these distinctive characteristics of each individual drug. It does more than this. It brings it into closer harmony with the subtle characteristics of disordered vitality. Some drugs, it is true, have so little individuality, so little active, inherent force, that trituration or dilution develops nothing because there was nothing there originally to develop. One would not expect any great output from calostrum or lac caninum. But who will claim that calcarea carb. in the third or sixth attenuation is not vastly more potent as a medicine than crude carbonate of lime? Who, that has ever tried the experiment, will argue that crude phosphorus is as valuable therapeutically as our dilutions or triturations of this same drug?

I have seen some very happy results from the one thousandth attenuation of nitro-glycerine (glycerin), but I should have hesitated to administer it in its crude form (glycerine nitrate). What Old School physician would consider quick silver as good a medicine as calomel; or what member of the New School would not prefer the second or third decimal of any of our forms of "mercurius" to either?

These are but a few of the multitudes of examples that might be mentioned to illustrate the fact that a drug or a substance may not be available at all as a medicine in its crude form, but yet may be made to yield incalculable good by trituration or dilution. Indeed, the use of crude and powerful drugs in a material or tangible form is, to use an old illustration, like attempting to tune a piano with a crowbar, or to repair the delicate mechanism of a watch with a sledge-hammer.

But let us hear what our author has to say on this point. He says:

"The first rag to cast off of homœopathy is potentiation of drugs by trituration and succussion."

"Hahnemann was a careful observer. He noted the fact that certain drugs, for example lycopodium, which in the crude form, or lowest triturations, was inert, became active or potent at the sixth or higher triturations. This latent power or influence, which was manifested by lycopodium at or above the sixth trituration, Hahnemann attributed to the trituration process; but subsequent light has revealed to us that successive trituration does not add any power to lycopodium which it did not originally possess. On the contrary, all that trituration does for lycopo-

dium, is to thoroughly break up the microscopical and flinty sporules of the plant, in which the active principles reside. And, according to the old method of trituration, this was more completely accomplished at the sixth trituration than at the first; and so the sixth was more potent than the first; or, to correct the phraseology, the sixth was not more potent than the first; but it was more suitable and better adapted as a means to an end. To make a rough comparison, it is like removing the shell of a cocoanut in order to utilize its meat. The cocoanut is just as potent before its shell is off, but not as useful."

If homœopathy shall succeed in convincing the medical world of the propriety of shucking its therapeutic cocoanut, it will be entitled to universal gratitude so long as the world needs medicine and a doctor to administer it.

Conceding, for the sake of the argument, that the psoric theory is a worthless delusion, and that "all symptoms attributed to provings with high potencies are of doubtful reliability," there yet remains to homœopathy enough of truth—scientific and practical truth—to immortalize its founder and call forth the enthusiastic plaudits of mankind to the end of time.

It should be remembered that when Hahnemann first published his new doctrine (1796) the pharmacists of Germany dominated medicine. The popular physician was he who prescribed the greatest number of drugs in the largest of practicable doses.

The physicians were poor; the pharmacists were rich. They persecuted Hahnemann until he quitted his native city in disgust, because he tried to teach the profession that it was the meat and the milk in the cocoanut and not the shell that was of therapeutic value.

The followers of Hahnemann since his day have been trying, and are still trying, to teach the same doctrine. The lesson, however, has been but half learned as yet, and after the germ theory, which, in the not far distant future, will be looked upon as the greatest medical delusion of the century, shall have had its day, the lesson may have to be learned all over again. Another Hahnemann may have to arise and bring about another revolution, or rather effect a restoration of the very same doctrines he originally taught a hundred years ago.

The search for a *materies morbi*, whether living or dead, animal or vegetable, which is now progressing, especially in German and French laboratories, has crazed the medical world, and, for the time being, has blinded it to the true principles of medicine based on physiology and clinical experience.

The present era will add an amusing, if not instructive, page to the history of medical delusions. The future historian will wax merry over phenic acid, blue glass, the Brown-Sequard elixir,

the treatment of tubercular phthisis by water, and especially over the Bergeon method of filling the intestines with sulphuretted hydrogen.

He will wonder at the credulity of the age, as well as its gullability, as he describes the popularity of "mind curers" and so-called "Christian scientists"—the Medical Nihilists of the Nineteenth Century. He will grow wroth as he describes how again the pharmacists dominated the schools, and forced them to use their secret and patented nostrums. He will wonder at the absurdity of giving such remedies as antipyrin, antifebrin, exalgine and phenaticine for the relief of pain, while doing nothing for the diseased condition causing the pain. He will point out how the status of medicine was never before so unstable and unsatisfactory as evidenced by the disposition almost everywhere exhibited to rush headlong after every new discovery, and to discard the old for whatever may be new.

But from this state of affairs there will come, there must come, a reaction. The present hallucination will be dispelled; the old paths will be found again, and followed with pleasure and success as in the past.

We are fully aware of the difficulty experienced by the sceptical mind in trying to understand how an infinitesimal dose of a given drug can have any decided and curative action in a given case of disease.

This difficulty lies primarily in over-estimating the real value of what we presume to know. The chemist talks glibly of organic elements, organic compounds and equivalents. He analyzes our foods, and tells us all about their ultimate composition. But what chemist after taking an egg to pieces can take the resultant substances and reproduce the egg. Analysis is one thing, synthesis is quite a different thing. The one is easy, the other in the nature of things is impossible, for life alone can reproduce life products.

Organic chemistry with all its vaunted power and knowledge, knows but little of the chemistry of life. During the French Revolution, a commission composed of French chemists of the highest repute pronounced gelatine more nutritious than albumen. In 1841, another French Commission, with Majendie at its head, declared gelatine to be utterly devoid of nutritive value. The latest and highest authority on human physiology declares that starch is unfit for infant food, but in spite of these dicta one of the best infant foods—one of the most assimilable, nutritious and valuable—is a food composed very largely of gelatine and arrow-root.

Why is it that some of our juiciest fruits require the driest of soils, while others, the driest, will only grow in abundance of water?

I have it on reliable authority that a gardener can only raise mushrooms by enriching his soil with a certain combination of manures. He may

make a bed of mold and mix with it pure ox-dung, but no mushrooms will spring up from seed placed in that bed. He may make another bed of like pure mold and horse-dung, but still no mushrooms will grow in it. But let him make another bed wherein he shall mix his mold with horse and ox-dung combined, and under proper circumstances as to light and heat, the same as in each of the other cases, and from the slightest impregnation of the bed, at one corner thereof, if you please, with "mushroom spawn" which is so intangible that it can not be discovered in the mold which encases it, to be even a microbe, and twenty-four hours will gladden the gardener's eyes with a plentiful crop of mushrooms springing up all over the bed and for weeks continuing so to do. Why this is so no one can tell. Chemistry is silent. It can not answer the question. It is a vital phenomenon and can not be explained on any purely chemical hypothesis.

It was Hahnemann's belief that disease was a disturbance of the vital forces; that it was essentially dynamic in its nature; that it was invisible, intangible, impalpable.

It is the same thing now that it was a hundred years ago, and just as amenable to the same treatment now as then. The ideal system of medicine, is that which touches most deftly the inharmonious chords of life and most delicately assists nature in her ever active efforts to repair the workings of a broken or disordered mechanism.

That drug is a medicine which possesses curative power. That medicine is best which cures most quickly, safely and pleasantly.

Homœopathy does not ask for faith, nor does it depend on credulity. It is neither nonsense nor nihilism. It is either scientific or all medicine is a delusion.

The action of drugs upon the sick; the clinical study of pharmacy was inaugurated by Hahnemann.

He of all the great physicians noted most carefully at the bedside the effect of his medicines and deduced therefrom a law of cure.

Before we discard the garments in which the Master clothed his thought and presented it to the world, let us be very careful to make a thorough examination of them and be very sure that they are really "rags" and unworthy of further preservation.

Sometimes it happens that cast off clothing contains that which on close inspection turns out to be of unexpected and surprising value.

Orchitis (Stephen Yeldham; *Homœopathy in Venereal Diseases*).—One of the earliest symptoms of orchitis is often a hard, stunning headache. This will sometimes come on and last twenty-four hours or so, before any signs of the local disease are manifest; and when, in the course of an attack of gonorrhœa, this symptom is complained of, the surgeon should be on the watch for that which is in all probability about to succeed—an attack of orchitis.

MEDICAL CASES IN THE COURTS.

BY HENRY A. RILEY, ESQ., NEW YORK.

IT was hardly to be expected that a question as to the perpetual use of land for cemeteries would arise, yet in so new a State as Kansas, such difficulties generally occurring only in old communities, but a recent case has brought up the question, and Kansas has decided as other States have done, that there is no absolute right in a lot owner to prevent in proper cases the abandonment of cemeteries. In the case at bar, however, the Court held that no good reason was shown for restoring the land to its former use, and the attempt to interfere with the cemetery was frustrated. On the general question of perpetuity the Court said: "If every portion of ground which has been made a burial place for man should be devoted in perpetuity to burial purposes, the most populous and cultivated districts of the world where millions upon millions of the human race have sunk into the earth in the countless ages of the past, would have to be abandoned as a dwelling-place or means of support to the living inhabitants of the present day.

"The devotion of land to any particular use must be subject to the changes and vicissitudes which time may bring to it. The use of a grave-yard is two-fold—for the purpose of continuous burials, and for the purpose of preserving the remains and memory of those who have been buried. The original uses can be continued only by the public continuing to bury, or by continuing to protect the remains already buried, and to preserve the identity and memory of the persons who have left them. It can hardly be said that there is anything compulsory on the public to do this, although desecration can be prevented at the instance of any one.

"The public may cease to bury in the dedicated ground whenever it pleases. It may also refuse or neglect to either erect or preserve any monuments to indicate the identity of those already buried, or to give and continue to the place the character and name of a grave-yard.

"When this happens the original use terminates and the fee vests in the original donors, or their legal representatives, free from it. It would be unjust that the public should retain the use for any other purpose than the one for which it was dedicated."

The question whether a child can recover for injuries suffered by carelessly straying into a place of danger is decided differently in the various States.

What is called the New York rule is that there can be no recovery because the parent or guardian was negligent in allowing the child to get beyond their control.

The Vermont rule is that the contributory

negligence of a parent, guardian or other person having control of the child is not to be imputed to the child itself.

The latter rule prevails in Illinois, and the question to be decided is whether the child is negligent or not, according to the experience usual to a person of its age. In a recent case in Illinois the Court said that many children of six years of age by their experience and intelligence are far more able to take care of themselves and avoid danger than others much older, and that the jury must decide in each case whether a verdict of damages is proper or not.

Hon. Henry Hitchcock, President of the American Bar Association, recently gave a review of current legislation in the different States, and spoke as follows about the protection and training of youth: "In respect to the protection of youth, a consensus of legislative opinion is found in ten States which would have been highly gratifying to the royal author of the counterblast against tobacco. In New Hampshire a fine of \$50, in Virginia of \$100, threatens him who sells cigarettes to minors; the Virginia act placing that dangerous combustible in the same category with pistols, dirks and bowie knives. In the other seven the prohibition includes the sale or gift of tobacco in any form, and in Kentucky the persuading of any child to smoke it; but from this restriction the youth of Maryland and Wyoming are emancipated at the age of fifteen, though the latter denies them the consolation of pistols and bowie-knives until twenty-one, those of North and South Dakota and Virginia after sixteen, of Michigan after seventeen, and of South Carolina and Kentucky after eighteen, while in Georgia the weed remains proscribed *durante minore etate*.

Stringent enactments in Ohio, Michigan and New Jersey protect children against abandonment or ill-treatment by their parents or others. Michigan declares every child under sixteen, whose parent or guardian habitually causes or permits its life, health or morals to be endangered, to be under the protection of public authority, and authorizes the Courts to place such child in a suitable State institution; while New Jersey authorizes them to be placed in charge of incorporated humane societies.

Wyoming forbids the sale to any person under twenty-one of any pistol, bowie-knife or other deadly weapon which may be concealed on the person. In Massachusetts it is made a State prison offence to print, publish, import, sell, or distribute literature tending to corrupt the morals of youth, and North Dakota punishes by fine and imprisonment the sale, gift or exhibition to, or within the view of, any minor child, of any book, magazine or newspaper principally made up of criminal news or pictures and stories of deeds of bloodshed, lust or crime; also authorizing the exclusion of

minors from court-rooms during trials of a scandalous or obscene nature.

In Maryland, itinerant musicians and street vendors of all kinds, having no place of business, are forbidden to have in their possession or company any boy or girl under eight years while engaged in any business on the street or highway.

In a recent English case a chemist's assistant sold to a customer "Battle's Vermin Killer," which contained strychnine, and the question was whether this made him liable to a fine of £5, the assistant not being a registered chemist.

The proprietor of the store was properly qualified to sell poisons under the law, and it was claimed that his rights were enjoyed also by his assistant, but the Court held to the opposite view, and directed the fine to be paid.

A recent case in Massachusetts is of interest as showing how far a Catholic priest can go in forbidding persons to employ a physician who was said to have broken some of the laws of that Church. The facts are not given very fully in the opinion, but it appears that the physician had been married a second time under circumstances which were disapproved of by the Church authorities.

The priest announced to his people that the marriage occurring as it did excommunicated the offender from the Church, and went on to say that they should not employ him in their families, and if they did, they could not have his ministrations in their sickness while the physician was under their roof.

The physician brought an action for damages against the priest, claiming that the words imputed professional misconduct and impropriety, and were intended to injure him in his calling as a physician.

The Court adopted this view, and sustained the physician in his claim for damages. It said in the opinion that the words import "not only that the plaintiff was not in himself a suitable person for a Catholic community to employ as a physician, but that if employed the patient must lose the attendance of a priest. But the jury might well find that the plaintiff was a suitable person to be employed then as a physician, notwithstanding his marriage and its ecclesiastical consequence. The defendant assumed to stand in a position of authority. By virtue of this position he was able to exert a special influence upon his people. He assumed to assert and to exercise this influence, and his words amounted, in the opinion of the jury, to a plain departure from the proper exercise of such influence, and virtually to an instruction that the plaintiff was an unsuitable and improper person to be employed as a physician, and a direction not to employ him, on pain of losing caste in the church and of losing the benefit of his ministrations as priest if they should

be sick. The words were also susceptible of the meaning that the plaintiff was an unfit man even to be met socially, and that the defendant would not sit at the same table with him." The Court cited as an analogous case the charge that a clergyman was guilty of a single act of drunkenness, made at a time when the habits of drinking intoxicating liquors were freer than at present. The decision was based on the ground that "a pure and even unsuspected moral character was necessary to their usefulness in the community."

The fact that the Courts hold that a similar high standard of professional reputation is required of physicians is of interest to the public, and physicians themselves will be pleased to know that they will be protected against unjust and malicious attacks made even under cover of ecclesiastical censure.

THE BEEF TEA DELUSION.*

By E. B. WARD, M. D., LAINSBURG, MICH.

THERE are certain fallacies in the practice of medicine which any one can see through, but which have been handed down from one generation of doctors to another, until they came to be accepted and even taught as truths.

Perhaps there is not one of them more generally adopted, or more harmful, than the beef tea delusion, and this was just now brought to my mind by reading, in a late medical magazine, "Prof. Keen's Method of Making Beef Tea." His method is much the same as was taught me thirty-five years ago, and which, even then, my juvenile medical mind revolted against to such an extent that I have not given beef tea for over thirty years. I substituted milk, which even, so recently as that was thought by good authority to be a dangerous pabulum in low stages of fever. My cases of death, however, were fully as rare, and it seemed to me more rare, than with patients otherwise managed. Here is Prof. Keen's method:

Select round or rump, as it is useless to spend money for choicer beefs when this is just as good for the purpose. Take one pound, chop it into fine pieces about the size of the end of the little finger, and soak in one pint of cold water for two hours. Then boil the whole, strain, and add enough water to make a pint. Add sufficient quantity of salt, pepper, etc., to suit the taste. The object of soaking in cold water is to get the essence out of the beef. If warm water is used, a coating of albumen coagulates on the surface of the beef, thus preventing the essence from escaping.

What a pity that a man assuming to be a teacher should so delude the rising generation of doctors. He is only one, however, of many, perhaps. Now, let us try to make some of this beef

tea. (I presume Prof. Keen never made a drop of it.)

We take a pound of finely-cut beef and pour a pint of cold water on it, and let it stand two hours—while we write about it. The water is not near sufficient to cover the beef, but with occasional agitation we get at the essence. At the end of two hours we find the meat surrounded by a reddish-colored liquid. Put a little of this fluid into a test tube, and hold it in the flame of a spirit lamp. You see it coagulates to the extent of one-fourth, perhaps. What is that? Well, never mind now, we are going to make some beef tea. Now, we proceed to "boil the whole." He doesn't say how long, and it does not make much difference so long as the water holds out. Now "strain and add sufficient water to make a pint." You perceive that it is too strong and has to be diluted. Let us take a little of this concentrated essence in a test-tube and examine it. Here is a translucent fluid with a bland taste, a neutral reaction, and a slight odor of beef. By closer inspection you observe little fine particles of sediment slowly settling. This, Pavy says, should be stirred up and given with the tea, but as it is only particles of coagula which have skipped through the strainer let us have it out. If part of it ought to come out, it all should. So we will filter this liquid, and you observe we have a limpid almost colorless fluid left, and a slight deposit on the filter. What is it? Well, we shall see shortly. Now take a little of this liquid in a test-tube and drop a few drops of nitric acid into it. There is no precipitate formed, so we know that there is no albumen or fibrin in it. What is in it? Well there is a little saline matter, and—a world of disappointment to any one who tries to sustain life with it. That is about all. Common well-water containing the average quantity of bacteria is more nourishing.

Thousands of sick people have been starved to death on this diet, and I want to enter my solemn protest against it before it is everlastingly too late. What you want is the albumen and fibrin of the meat in a condition requiring little digestive power, and that will be readily assimilated. The moment you coagulate these ingredients by heat you render them practically indigestible. These, however, by this process are mostly strained out and the fluid left is inert, or nearly so.

Good milk is preferable always, but if you must give beef tea, *never boil it*. Liebig says 120° F. is the highest temperature to which it should be subjected. It is not very inviting in its general aspect, but it holds in solution the ingredients that you want, and which are rendered useless for a weak digestion by boiling. Liebig's plan is to add a little hydrochloric acid.

Perhaps there is nothing in the whole round of dietetics, however, that holds so much real needed food in a given space, as good rich milk punch,—teetotalers to the contrary notwithstanding.

* American Lancet.

"CACTUS GRANDIFLORUS AS A SUBSTITUTE FOR DIGITALIS."

BY ALFRED K. HILLS, M. D.

IT SEEMS to us as highly improper to speak of a drug "as a substitute for" another. If our readers will examine the effects produced by cactus and digitalis respectively, it will be readily seen that the one can not be substituted for the other upon any but theoretical grounds.

Cactus acts especially upon the circular fibers of the heart and arteries, causing irritability, hyperæsthesia, neuralgia, spasm and palpitation. This condition is characterized subjectively by a sensation of constriction which is especially marked with this drug, by sharp stitch-like pains, by dyspnoea and by palpitation.

Objectively we may find endocardial murmurs, excessive impulse or irregularity of the heart's action. Cactus resembles digitalis in respect only to its power of producing heart-failure, and this result is due to the secondary effect in the case of both.

Cactus will prove palliative in cases of hypertrophy of the heart, with the characteristic constriction and dilatation is not predominant, while digitalis is more likely to palliate in cases where dilatation is predominant and the pulse shows feebleness.

Cactus resembles aconite in its effect upon the heart much more than it does digitalis.

Cactus is much more likely to be of service in angina pectoris than is digitalis!

So far as we know, cactus has little influence upon the renal secretion, while digitalis has a profound effect in appropriate cases.

Cactus has copious expectoration, oppression of breathing on ascending, can not assume the horizontal position, and all its conditions are marked by that feeling of *constriction* which is so characteristic!

Digitalis seems to act upon all the muscular fibers alike, but the drug is not equal to producing carditis or pericarditis.

An editorial in the Journal of the American Medical Association for July 28th, 1888,* strikes the key-note regarding the use of this drug.

It reads thus: "When the patient has entered upon the period of hypersystolism characterized by increased arterial tension, then digitalis is injurious. Increased arterial tension Huchard regards as the cause rather than the effect of sclerosis, and in the early period of arterio-sclerosis, digitalis should only be employed with caution.

It should be remembered always that if we wish to strengthen the heart, we must facilitate and lighten its work. * * * It is efficacious when the cardiac muscle and the vessels are suffering from asthenia, and when there are œdemas, vis-

ceral congestions, dropsies, and the heart beats softly and feebly.

Digitalis relieves dropsy through its action upon a weak heart, thereby furnishing the kidneys with the normal quantity of blood, and thus restoration of functional activity is obtained.

Digitalis has a sighing respiration—desire to take a deep breath—a sensation as if there was an impediment, or as if the tissues were adherent.

There is little or no expectoration, thus showing a marked contrast with cactus.

We may thus sum up in reference to digitalis:

1. Digitalis is indicated where there is profuse discharges of urine of watery character, and attended with quick pulse, in small doses, even minute.

2. It is indicated in cases where the urine is scanty, heavily loaded with solids, cardiac debility, hepatic torpor and dropsical effusion, in doses as large as will be borne.

Digitalis, so far as we know, has a much wider field of application than cactus.

AGARICUS IN FROST-BITE.

Frost-bite and chilblains, according to our experience, are best relieved by agaricus muscarius.

We generally use a tablet every two hours internally, of the one-tenth dilution, and an alcoholic solution containing one-tenth of the drug may be used locally. There is no remedy in the materia medica that we know of that relieves so promptly and so effectually.

CLINIQUE.

CLINICAL LECTURE ON OPIUM.*

BY H. C. WOOD, M. D.

Professor of Therapeutics, University of Pennsylvania.

* * * OPIUM: the inspissated juice of the unripe capsules of the *Papaver somniferum*, or poppy. It is a very complex body, containing the alkaloids morphine, codeine, narceine, narcotine, etc., also meconic, thebolactic and sulphuric acids, extractives, a volatile odorous principle, and other substances of no importance. Of these various elements in opium, morphine and codeine are the only ones used in practical medicine. Narcotine is of interest, as to it is usually ascribed the depressing and sickening influences of the drug. Hence its elimination from all other preparations is an advantage.

In the study of the preparations to be used, we find that there are only a few worthy of consideration. The dose of the solid opium is one grain. The extract—twice the strength of the solid opium—is a preferable preparation, as it has lost the alkaloid narcotine, which has been removed by

* See Hale on "Diseases of the Heart."

* An abstract from *Med. and Surg. Reporter*.

ether. Laudanum, containing ten per cent. of opium, is given ordinarily in the doses of fifteen minims—about twenty-five drops—each drop varying from one-half to two-thirds of a minim, according to the size and shape of the vessel used as a dropper. The deodorized tincture of opium contains no narcotine or oleaginous principle. It is always to be selected when a strong internal form of the drug is wanted. It is prepared by infusion, being a watery preparation, containing only enough alcohol to keep the drug properly. It is less liable to sicken than any other form of the drug. Its drop is nearly a minim in size. *Tinctura opii, acamphorata*, or *paregoric*, has in every fluid ounce two grains of opium, besides camphor and oil of anise, which give it its characteristic taste. It is more constipating than other preparations of opium on account of the camphor, and hence is more suited to diarrhoea mixtures. Eighteen drops of *paregoric* are equal to one of the deodorized tincture. The only other preparation of opium worthy of our consideration is the so-called Dover's powders—*pulvis opii et ipecacuanhæ*. They are now made of eight grains of sugar of milk to one grain each of *ipecac* and opium. They are especially useful for their action on the skin, being a capital combination of an opiate and a diaphoretic. Their use with children is dangerous; as they are prepared on a large scale, and often being not well mixed, they may contain much more opium than is directed.

Opium given in small doses produces first a feeling of slight exhilaration. This is quickly followed by a sensation of quiet, a subduing of restlessness, a dreamy half-sleep which may continue for hours. The state produced is not one of stimulation of the reasoning powers, but rather a kindling of the imagination. Where there is no especial desire for activity, sooner or later, depending on the patient and the size of the dose, he falls into a quiet sleep, which is not to be distinguished in any way from ordinary slumber. He awakes with a slight dryness of the throat, some depression, nausea and impairment of digestion. For a few hours also there is apt to be constipation. Some cases however show marked depression of spirits, excessive nausea and vomiting, weak pulse and muscular debility, instead of the usual symptoms I have just gone over. The vomiting is apt to be increased by any change in condition, even of the slightest. It is almost diagnostic of this condition that the patient is quiet as long as he is in a horizontal position; but on attempting to rise this vomiting again comes on. In some cases this condition of depression replaces the ordinary symptoms entirely. In other patients severe pruritus is common when the action of opium is going off. This may be so pronounced that it forbids the use of the drug. In children, especially young children, opium, even in very small doses, frequently produces dif-

ferent symptoms, causing most pronounced depression.

The phenomena of a large dose are divided for convenience into three stages. These stages are not sharply marked; they glide into each other with no sudden changes. The first stage can be called for convenience "the stage of quiet excitement." There is no real increase in cerebral power; there is a cerebral stimulation only from the pleasant effects which are produced. There is the peculiar stimulation of the imagination in which dreams pass in endless quiet succession before the mind. If the dose be quite large, this stage may be correspondingly short. In those who are in the habit of taking opium, there may be frequently actual increase in intellectual power. Then appear the characteristic phenomena of the second stage. The respiration is slow and deep; the pulse is slow, full and strong; the body is warm and dry; the pupils are firmly contracted; the face is more or less suffused. There is abolition of all cerebral faculties, but not so complete that the patient can not be aroused. No matter how profound the sleep may seem to be, the sleeper can be wakened up. This is an important distinction, which separates these cases from those of apoplexy. If a patient fails to respond to proper stimuli, you can be sure that a more deadly drug than opium is operating. The respiration, which is slow and full, gradually falls in rate, although on arousing the patient it is temporarily quickened. It drops from sixteen to twelve, to ten, to eight, to six, to four in the minute. The pulse comes down from seventy-five to sixty; rarely does it fall below fifty. It is still full and strong; but it does not have the great mighty stroke of the digitalis pulse. In the development of the third stage we have the same phenomena, modified by the appearance of exhaustion. The pupils are still contracted; the unconsciousness has become deeper; the respirations are distant, slow and feeble. The surface of the body is bathed in a cold, clammy sweat. The pulse is small, running and rapid. If nature is left to herself, these symptoms deepen; the respirations become excessively slow, interrupted by periods of death-like silence; the countenance grows more and more cyanotic, the lamp of life is flickering; as death approaches, the pupils widely dilate, as if to allow the soul to escape. Rarely is the course of the drug's action broken by storms—convulsions—in the Anglo-Saxon adult; they are more common in the Asiatic and in children. * * *

First, the action on the nervous system. Its chief action here is as a paralyzant to the cerebral cortex. It was formerly taught and believed that it produced congestion of the brain; all that we know is that the protoplasm of the brain-cells is affected by its active principle. Below the cortex, the respiratory center is early affected; this is proved by experiments in which it was found

that in animals the drug's effect was not altered by section or stimulation of the vagi, showing that its action is on the center itself.

Second, the action on the circulation. Gscheidlen cut the pneumogastrics in an animal and gave opium, and the slow, full pulse was not produced: proving that the drug acts on the inhibitory cardiac nerves. It is also probable that it acts on the inhibitory cerebral centers, stimulating them. This is demonstrated by the instantaneous great fall in pulse-rate following the injection of a large dose of the alkaloid into the carotid—that is, into the inhibitory brain centers. * * *

The pupil is contracted by direct action on the oculomotor centers; the dilation as death approaches is due to paralysis of the same. * * *

In small doses morphine is a quietener of peristaltic motion; by large doses it is increased. More important is the glandular action of opium; it acts in a most marked way on the whole alimentary tract, checking secretion and causing constipation. * * *

In cases of suppression of urine a new source of danger is apparent with opium in the system; being unable to excrete it, the kidneys throw it back into the circulation, renewing its poisonous powers on the economy. Again, in old people with weak bladders, in which there is great retention of urine, there is danger of re-absorption of the drug and its entrance again into the circulation. In severe kidney trouble, opium is undoubtedly a dangerous remedy. Its use in uræmia, for the production of diuresis, is not only ridiculous but decidedly reprehensible. Morphine thrown into the system from the bladder or the kidneys, seems to act with increased power on the economy. * * *

Morphine is less of a desiccant, causes less nausea and constipation. It is about four times as powerful in its action as opium.

When an overdose of opium is taken, the respiration always fails first. As unconsciousness deepens, the sensibility of the respiratory centers grows less. Consequently involuntary breathing becomes less perfectly performed. Moreover, when kept partially awake, the patient suffering with opium poisoning can be made to supplement the almost suspended involuntary breathing by voluntary efforts. Hence, there is one overwhelming indication to maintain the respiration. First, evacuate the stomach of its poisonous contents. If possible do this with an emetic. But, in view of the fact that the peripheral nerves have been benumbed by the action of the drug and the sensibility of the centers in the medulla have been diminished, a powerfully stimulant emetic is the only one of service. The so-called mechanical emetics are good, and but little depressing: sulphate of copper, or, better, sulphate of zinc or mustard. Mustard flour is generally found in the household, and is efficient. A large tablespoonful

in a tumblerful of warm water should be given at once; and the dose repeated in fifteen minutes until effective. Thirty grains each of sulphate of zinc and ipecacuanha may follow; to be repeated once or twice. Large draughts of warm water should be administered in the intervals and between the vomitings, to wash out the stomach. If this should fail, then the stomach-pump should be used. It is of no service when the opium has been swallowed in solid form. A fountain-syringe with rectal tube removed, or, in an emergency, a rubber gas-pipe may be used. The external end is elevated after the other end has been passed into the stomach; water is poured into the tube by means of a funnel until the stomach is full; then, without the tube being allowed to empty itself, it is depressed, when the flow of water will be reversed. Maintain the bodily heat as in other forms of narcotic poisoning. Arouse the patient chiefly to maintain the respiration. The breathing is fuller and faster when the patient is awake, and conscious effort is added. It is often surprising how an apparently unconscious man will keep on breathing at the word of command. Walking, shaking, shouting, flagellations with fine twigs are all measures to be used. But remember you can walk your patient to death; you can easily bring on exhaustion, which only increases the odds against his life. I wish to call attention to the intense irritation produced by the Galvanic or Faradic dry brush. This is an agent which is strongly helpful in preserving consciousness; it is not depressing or exhausting, and leaves no trace behind. * * *

The cold douche is an excellent method of restoring consciousness, stimulating at the same time the respiration. Supporting the head and shoulders over an ordinary wash tub and dashing on them ice-cold water, and water a little hotter than the hand will bear alternately, is good in its effects. * * *

The chief good done by coffee is its stimulation to the respiratory centers. Coffee is preferable to caffeine because the empyreumatic oil which it contains is more efficient in preserving consciousness, and in this indirect way aiding the respiration. Atropine as a respiratory stimulant is of the greatest importance in opium poisoning, when there is evidence of failure of respiration. There is no antagonism, in the strict sense of the word, between opium and atropine in their respective action on the eye. Opium contracts the pupil by influencing the nerve centers; atropine dilates the pupil by acting on the peripheral nerves. Do not give large doses, but frequent doses. A fiftieth or fortieth at once, followed by a sixtieth in fifteen, twenty or thirty minutes. The bodily temperature can be maintained by the use of external heat. * * *

Whenever life is seriously menaced, artificial respiration should be resorted to. The ordinary

form used by dentists in nitrous oxide gas inhalation is the best and simplest for the purpose. * * *

In neuralgias and chronic disease, it should be used with the greatest reluctance, for fear of the formation of the opium habit. * * *

In confusional insanity, especially that form called delirium tremens, it must be used with care, so as not to overwhelm the nerve centers. For the restlessness and insomnia of typhoid it is among the safest agents; and yet there is an almost universal prejudice against its use here. * * *

It is of service in great mental shock of any form. In great peripheral irritation, as in confluent small-pox, where the patient is tortured with untold agonies, its use is indicated. Beyond the relief of pain there seems to be a sustaining power in opium produced by benumbing the centers of organic life; hence in widespread inflammations where systemic collapse is threatened, opium exerts a life-saving power. There was a time when the universal treatment of peritonitis was the administration of opium. It is good treatment beyond all doubt in proper cases, and is still largely used. In sthenic cases, depletion by leeches or bleeding should be employed at the outset; or the depletion can be obtained by free purgation with saline purges. Closely allied to its use in peritonitis is the service of opium in severe enteritis, where there is a paralytic condition of the muscular coat of the intestines. Here constipation from obstruction occurs. The use of irritant purgatives only serves to increase the trouble. Opium, by allowing the muscular coat to be relieved from spasm, apparently acts as a cathartic. The extract of opium is soluble in water and free from narcotine, making it the preferable preparation. * * *

Opium is used to check secretions. Nature's method of curing this disease is by free secretion; so beware in giving opium in this trouble. * * *

Paregoric should never be given except when its constipating influence is desired. Children bear opium badly. Never give more than one-third of the dose for children as indicated by Young's rule. Never press its use, as in the adult, lest there be developed a tendency to sudden collapse; or to convulsions.

Chronic opium poisoning—commonly called the opium habit, deserves our attention. * * * There are three ways for the withdrawal of the drug: first, taking it away at once; second, withdrawing it in from five to ten days; and, third, taking months for its removal. If it is done abruptly there is danger of collapse, excessive malaise, insomnia, complete loss of appetite, vomiting, terrific diarrhoea and general checking of secretions. When seven to ten days is the limit set for its withdrawal, I have never seen a case that produced symptoms that could not be controlled. The slow method, I believe to be uncertain in its results. Proper feeding is of great service in re-

lieving distressing signs. The use of electricity is good, not only for its effect on the system, but also to distract the patient's attention from himself. Massage serves the same dual purpose. External warmth, hot drinks, broths, stimulating easily-digested food, are indicated. Bromide of potassium, quinine, etc., can be employed as needed. In withdrawing the drug it is better always to deceive the patient as to the quantity of the drug which he is getting. There are various methods for this purpose. When the morphia is taken hypodermically, it can be gradually replaced with distilled water in the injection. When morphia is taken by the mouth, make it up with quinine; this disguises the taste, rendering it impossible for the patient to judge the amount he is receiving. Quinine is an excellent tonic, the powders are kept the same size, quinine gradually replacing the morphine. * * *

RETROSPECTIVE DIETETICS.

Dietetic Progress (Dr. Wallace Wood, *Journal of Reconstructives*).—Astronomy means the laws of the stars; gastronomy means the laws of the gullet. A grand dinner is a complicated affair, and has only been evolved by ages of civilization and culture. Primitive races eat whatever they can get and whenever they can get it. Nomadic tribes with flocks and herds establish regular needs, and discover the oldest gastronomic combination, bread and meat. The peasantry of civilized nations combine dishes together to make the "square meal," say meat, potatoes, and a relish with bread and butter. Cultured people gradually come to add two courses to this "square meal," one at the end called dessert, to help digestion; the other at the beginning, the preliminary course or gusto, to whet the appetite. In a state of still higher refinement each of these courses falls into two parts. The "after meal" comprises pastry and dessert; the "mid meal," meat and game; the "preliminary meal," soup and fish. But the height is reached in the grand symposium or banquet of nine courses: 1, hors d'œuvre; 2, potage; 3, poisson; 4, relevé; 5, entrée; 6, rôti; 7, entremet; 8, sucrée; 9, dessert. Nine courses, exclusive of punches and coffee; nine meals in one; *après nous le déluge*—indigestion, gout, and biliousness; exit the cook, enter the doctor.

The Dietetics of Pulmonary Phthisis.—Dr. Alfred L. Loomis, in the *Journal of Reconstructives*, formulates some of the most important rules which govern the dietetics of phthisis, as follows:

1. Every phthisical patient should take food not less than six times in twenty-four hours. The three full meals may be at intervals of six hours with light lunches between.
2. No more food should be taken at any one time than can be digested easily and fully in the time allowed.
3. Food should never be taken when the patient is suffering from bodily fatigue, mental worry or nervous excitement. For this reason mid-day naps should be taken before, not after, eating. Twenty to thirty minutes rest in the recumbent posture, even if sleep is not obtained, will often prove of more value as an adjuvant to digestion than pharmaceutical preparations.
4. So far as possible each meal should consist of such articles as require about the same time for digestion, or, better still, of a single article.
5. Within reasonable limits the articles of any one meal should be such as are digested in either the stomach or intestine alone, i. e., the fats, starches and sugars should not

be mixed with the albuminoids, and the meals should alternate in this respect.

6. In the earlier stages the amount of fluid taken with the meals should be small, and later the use of some solid food is to be continued as long as possible.

7. When the pressure of food in the stomach excites cough, or when paroxysms of coughing have induced vomiting, the ingestion of food must be delayed until the cough ceases, or an appropriate sedative may be employed. In those extreme cases where every attempt at eating excites nausea, vomiting and spasmodic cough, excellent results are attained by artificial feeding through the soft rubber stomach tube.

8. So long as the strength will permit assimilation and excretion must be stimulated by systematic exercise, and when this is no longer possible the nutritive processes may be materially assisted by passive exercise at regular intervals.

Nutritive Value of Powdered Cocoa.—According to M. Carles (*Bull. de la Soc. De Pharm. De Bordeaux*), the various powdered cocoas which are so widely advertised, though possessing some advantages in respect of digestibility and easy preparation, are decidedly inferior to ordinary chocolate when considered from an alimentary point of view. This is owing to the fact that the cocoa berry contains about fifty per cent. of fat, the greater part of which must be extracted before the remainder can be reduced to a fine powder. Such extraction has precisely the same effect as taking the cream from milk, the yolk from eggs, the oil from olives, etc., would produce in the case of these articles of food. Moreover, the cocoa-butter contributes a portion of that peculiar flavoring substance which caused this product to be known as theobroma, "food for the gods," and whose action as an aperient is also not without value. Whatever amount of butter may be left in the powder is liable, because of the large surface which the latter exposes to the air, to become speedily rancid.

On the whole, M. Carles is not inclined to regard the popularity of powdered cocoa as a sign of hygienic progress.

The Cheapest Animal Food.—It would appear, says the *Mass. Med. Journal*, that the nutritive value of milk, as compared with other articles of animal food, is not generally appreciated. There is less difference between the economical value of milk, beefsteak, eggs or fish, than is commonly supposed. The quantity of water in good milk is 86 to 87 per cent.; in round steak, 75 per cent.; in fatter beef, 60 per cent.; in eggs, about 68 per cent. From analyses made, it is estimated that sirloin steak (reckoning the loss from bone at 35 cents a pound) is as dear as milk at 24 cents a quart; that round steak at 20 cents a pound is as dear as milk at 14 cents a quart; and corned beef at 17 cents as dear as milk at 15 cents. The results from these deductions seems to be that milk at even 13 cents a quart is the cheapest animal food that can be used.

Microbes in Vichy Water.—The examination of Vichy water in bottles, commenced in Germany by Reinl and in America by Ninges, has given alarming results, nearly all the bottled mineral waters having been found to be charged with germs (*Progrès Méd.*). Temperature, pipes, pumps are elements of much influence on the number of germs in the bottled waters. In the particular case mentioned, Poncet has found an average of 1,467 germs per cubic centimeter of grande-grille water in bottles. These germs are the same as found in Griffon water at the source. Poncet has discovered in siphons of seltzer water, examined by him in Vichy, the presence of germs in innumerable quantities. As a general result, the bottles of grande-grille water contain far more germs than the water of the source, the proportion being 9.14 per cent. per cubic centimeter. It would be advisable to modify the methods of bottling, to subject them to steaming, as well as the corks, and then to

proceed to the introduction of the water immediately and aseptically. The bottles should be kept in cold places. These precautions would certainly diminish the number of germs and would save for this mineral water one of the conditions of its therapeutic value; its original microbial purity.

"Eating Air."—Dr. E. Cutter, at a meeting of the American Medical Association, said that air is food; mineral food at that, as water is mineral food; his definition of food being any substance from without taken into the human body, which becomes a normal constituent part of that body. Then as the oxygen and nitrogen of the air become component parts of the body they are food. This idea was an old one. Once, in going from New York to Boston, he sat near a man in the cabin who had open on his knees a book in Hindostanee, and in his hands he had an open book in French. He was a missionary from India, and spoke twelve languages. On being asked if he thought that English would be the universal language, he said "No, it is not expressive enough." For example, we say in English "A man walks out, and a dog walks out," but the Hindostanee language puts it, "The dog walks out and the man goes forth 'eating air.'" This expression is three thousand years old.

Again, the same idea is met with in Plutarch's lives. A late account of the gypsies states that they every morning go out early and inhale full breaths; hold them; pound their chests hard in expiration, and then inhale deeply again, and so on. This they call "eating air." He said further, that he never could believe that nitrogen was an inert substance in the air. Just as the false vocal cords were denounced as almost useless things and hence called "false," and as it had been found out that they were as active as the true vocal cords in the control of the expiration, so he thought that some time the active function of nitrogen in the air would be found out. The amount of nitrogen consumed by the human race daily was enormous and could not be overlooked.

The Feeding of Puerperal Convalescents.—Charles Meigs Wilson, M. D., *Dietetic Gazette*, July 13, 1889. * * * The notion so prevalent thirty or forty years ago, that to give a puerperal convalescent a good, wholesome, easily digested and easily assimilated diet was a dangerous procedure, has gone forever, and given place to a proper dietary regimen, based upon the clinical observation of what is needed to best restore the whole economy to its regular hygienic functional activity, to restore the vital forces of the patient, exhausted or overtaxed by the process of parturition, to enable her to furnish the proper amount of nutritive material to supply the wants of her own economy, and to furnish a proper pabulum for the sustenance of her offspring. * * * In private as well as in hospital practice it has been my habit to carefully instruct my nurse after every case of labor, telling her as soon as the patient is properly cleansed and the room put in order, to bring the patient a cup of hot tea or coffee, well diluted with milk, and a small piece of softened water toast or a small water cracker. If the patient has a liking for cocoa or chocolate, all the better. * * * If the patient prefer it she may have instead, a glass of milk, or milk slightly diluted with water, charged with carbonic acid gas. This may be given hot or cold, but as a rule warm or hot drinks are most acceptable to the patient, better borne by the stomach, and have the additional advantage of stimulating the uterus to contract, thus insuring prompt primary involution of that viscus and lessening the likelihood of secondary postpartum hemorrhage. After the patient has had an interval of repose and rest, and upon her expressing a desire for food, the nurse is directed to give her a cup of animal broth, beef, chicken or mutton tea, to which has been added some rice or barley, the latter so long immersed and so well boiled in the soup that the grains are disintegrated. Then at the next meal time the patient may have a soft

cooked egg or some milk-toast made out of stale bread; in addition she is given from time to time a glass of milk. No form of easily digested and nutritious food for which the patient may have a desire, provided it be of the semi-solid variety, however, should be interdicted. And thus the patient should be fed until the bowels are moved. * * * Once an evacuation from the bowels has taken place the patient is allowed to use her own choice in the matter of food, except that all indigestible and fatty foods are forbidden, as well as the leguminous vegetables—peas, beans, potatoes and such like. On the contrary, she is urged to eat of green vegetables—salad, asparagus and so forth. Meat is given for the morning and noon meal, if the patient desire it, but the evening meal is always a light one and of a simple character. Midway between each meal and at bedtime, the patient is given a glass of milk to which has been added a half an ounce of lime water. It is essential to see that the bowels are opened at least once in every forty-eight hours. This is best accomplished by getting the patient to take a little stewed fruit in the way of dessert, as stewed prunes or prunelles, or an orange before breakfast. * * * The foregoing directions as regards the diet of the puerperal convalescent apply, of course, only to those whose convalescence is a normal one—devoid of pyrexia and uncomplicated by sepsis or any other accident of the puerperium. * * * In the conditions of exhaustion following a tedious or protracted labor, the great thing is to speedily restore the vital forces, and to do it in such a way that the little strength or vitality left the patient shall be taxed in the process of digestion and assimilation as little as possible. To meet these indications, the patient should be put almost exclusively upon a milk diet, because that food is most easily assimilated and digested and quickly turned in the economy into life-giving strength. Under these circumstances, also, small quantities of alcohol are indicated; as a drachm or two of whiskey or brandy every two or three hours. This diet may be varied by giving occasionally a small quantity of Valentine's fluid extract of beef, properly diluted with water, or some concentrated animal broth. Where profuse post-partum hemorrhage has taken place, the first need is stimulation—a cup of hot coffee—followed at short intervals with as much milk, diluted with lime water and given in small quantities, as the patient will take. Mild stimulation should be kept up. One of the most acceptable agents to use for this purpose is champagne, a dry brand, or whiskey or brandy diluted with carbonated effervescent water. No form of food more quickly restores the volume of blood and makes up for the blood lost, in post-partum hemorrhage, than milk. Where labor has been complicated by uremia, eclampsia, or albuminuria, and when, of course, the circulation is loaded with retained urea and teems with excrementitious matter, the patient wants food to support her through her ordeal of complicated convalescence, whose digestion will yield but little urea. What better food have we for this purpose than milk? Under these circumstances, also, all forms of meat should be excluded from the patient's diet. It stands without need of defence that wherever pyrexia supervenes the patient should have an absolutely liquid diet. Should the patient have diabetes, a diabetic diet should be employed, from which all articles of food containing sugar and starch should be excluded. Acute illness developing during puerperal convalescence requires no different diet from that which should be employed had the disease appeared at any other period. Where galactocoele or galactorrhoea—in other words, hypersecretion of milk—occurs, the patient should be placed on a dry diet, i. e., one in which the liquids are excluded as far as possible. On the other hand, where the mammary glands fail to properly perform their functions and secrete a sufficient supply of milk to afford nutritive pabulum for the child, the diet should be, as far as possible, liquid in character and rich in the elements of nutrition; hence, of course, we would give

milk, as much as the patient can take, and concentrated animal broths. For this purpose I have frequently used, with great satisfaction, strong gruels made of Mellin's food. Where the stomach has been irritable, or non-tolerant of food, I have met with the best success in feeding my patients by using peptonized sterilized milk, sterilized after the method of Prof. Soxhlet, and peptonized with some good pepsin. The directions herein given for the alimentation of puerperal convalescents are based upon the clinical observation and experience of more than a thousand cases of labor and puerperal convalescence, the majority of which occurred in the Philadelphia Lying-in Charity, where every possible means was afforded for observation, and where faithful records of all cases were accurately kept. They are also based upon a series of interesting experiments in which the amount of milk secreted and the amount of urea excreted were carefully noted, as compared with the kind and amount of food given.

Infant Feeding and Nutrition (By W. I. Thayer, M. D., *Pacific Medical Journal*, August, 1890).—The enamel of the teeth should contain 96 per cent. of calcareous matter; the dentine 78 and the cementum 67 to 70 per cent. of lime salts. A full average of from 80 to 82 per cent. Yet the large majority of people under forty years of age do not possess teeth whose inorganic constituents will average much over 60 per cent.

It is the whole of the grain of the wheat, the rye, the corn, the oat, that must be eaten if we desire to properly feed the petrous, bony and muscular tissue.

There is no food, except the cereals, that can supply a normal quantity of calcareous matter. But then, it must be the *unbolted* product. The outside—bran—of all these cereals is rich in calcareous matter. That has not been so constructed anywhere else, as to be *easily divided* by digestion and readily absorbed and *appropriated* by the hungry tissues.

By force of circumstances our early progenitors were compelled to eat of the *coarser* bread foods, and they reaped their reward. The greatest dental misfortune in this land is the construction and use of the bolting machines in our flouring mills. . . . Nitrogenous food will not supply the carbonate and phosphate of lime for petrous tissue building. It *must* be from sources indicated above.

Infants can not digest starchy foods. But the fetus can be fed by salts through the umbilicus, and the infant through the mammary glands and from the bottle.

Every pregnant and nursing woman *should eat* liberally three times a day of these coarse bread foods to the intent that the forming and growing teeth may be supplied with the necessary lime salts.

While we hold that a *well-fed* human milk is the best pabulum for an infant, some understanding of the requirements for bottle-fed babies is valuable.

I can see no objection to mentioning a truly valuable article whether it be an instrument, a new drug or an article of food, for every active practitioner is constantly asked: What shall I feed the baby? For years we have used Carnrick's soluble food; but for infants under six months of age prefer the lacto-preparata, which is composed entirely of dessicated, partly digested cow's milk, and contains a liberal supply of the calcareous salts to fully nutrify the muscular and hard tissues, especially the *growing* teeth!

I know of no other infant's artificial food composed wholly of milk and its *derivatives* than the lacto-preparata. Starch in an infant's food, whether supplied domestically or commercially from any of the cereals, will not aid in the digestion of cow casein, but cause constipation, alternating diarrhoea and marasmus.

The fetus should be well supplied with the inorganic constituents; for the temporary teeth begin to form as

early as the sixth week, and the infant, child and youth should have a liberal supply of these lime salts if it is expected to construct dense and hence decay-resisting teeth.

Fish as an Article of Diet (*Journal of Reconstructives*, July, 1887).—We notice that fish is looked upon as a therapeutic food, if I may be allowed to call it so, for we find it particularly recommended in diseases of the nervous system, and in convalescence, from low fevers, brain workers, neurasthenics, and the whole line of allied disorders in consequence of the widely entertained belief that fish contains certain elements which adapt it in an especial manner to renovate the brain and nervous system, giving it the vital essence of life, and so to support mental labor. There is no foundation whatever for this view. The value of fish to the brain worker is due simply to the fact that it contains, in smaller proportion than meat, those materials which, taken abundantly, demand much physical labor for their complete consumption, and which, without this, producing an unhealthy condition of body more or less incompatible with the easy and active exercise of the functions of the brain. We find also that the flesh of fish is less satisfying to the appetite than the flesh of either animals or birds, as it contains a larger proportion of water, as shown by Brande:

	Water,	Albumen & Fibrin,	Gelatine,	Nutritious material.
Beef,	74	20	6	26
Haddock, 82	13	5	18	

One experimenter found himself weakened by fish diet, and he states that persons are generally debilitated by Lent diet. When jockeys are preparing for the races and wish to reduce their weight, they are placed upon fish diet. So much for current notions that cause fish to be used as an article of general diet said to be wholesome and important. Notwithstanding so much authority in favor of fish, I have for some time noticed that many persons complain that they can not eat fish without having a disturbance of the digestive organs, presenting a history somewhat as follows: "How is it I can not eat fish? I have tried many kinds, cooked in all sorts of ways, broiled, boiled, fried, etc., but it does not seem to agree with me. An hour or two after eating it I have a sense of heaviness and fullness at the pit of my stomach, followed by eructations tasting strongly of fish, with heartburn, an eruption of hives, and often an irritation of the bowels with diarrhoea."

This is a history given by those who, to all appearances, are called healthy. The most unfortunate fact is, that when given to the sick or convalescent, the same symptoms are noted, frequently causing a relapse and often fatal results. Consequently it should be stricken from the list on the diet card for the severe neurasthenic and those suffering from allied disorders. Of the usual means of preparing fish—broiled, boiled, fried and steamed—the steamed fish is better adapted to the sick than any other way, because it is of finer flavor, more thoroughly cooked, consequently more tender and less likely to cause disturbance or distress, but requiring to be closely watched and given only in small quantity. This is the result obtained by experiments upon myself, close observation of the effects upon my patients, and by a line of artificial digestion that compels me, in summing up, to say, that for patients having tender stomachs, convalescents from low fevers, severe neurasthenia, nervous indigestion and chorea, that fish is not an article of food to be considered in the bill of fare for such patient—steamed, broiled, boiled or fried. But if used never to be given alone as the sole nitrogenous article of food, but followed by some other form of meat. The fish should be only steamed.

From "The Coming Man: A Dietetic Problem" (By Frank Woodbury, A. M., M. D., *Medical Mirror*, August, 1890).—Man is able to subsist upon various kinds of food, and among native races much diversity exists owing to accident, environment, habit, convenience or choice.

Although man is called omnivorous, yet it is very evident that certain alimentary substances are better adapted to his digestive capacity, and afford him more nutriment, than others. Science is now in a position to declare very accurately the value of different kinds of food, and to prescribe diet adapted to different conditions of health and disease.

Health and physical integrity in all the higher animals depend upon receiving regular supplies of appropriate nourishment, and physical degeneration rapidly results where the food is given irregularly and is not suitable for assimilation. Man is no exception to this rule. The study of the dietary of large numbers of men, as of soldiers or convicts, has demonstrated a constant relation between food and work, so that we have in our possession the data for a subsistence diet and a working diet, the latter containing a larger proportionate quantity of nitrogen-bearing proximate principles than the former. A favorite theme for the philosophers in all ages has been the effects of diets of different kinds, not only upon the physical frame, but also upon the temperament and mental and moral characters of men. Raw meat is supposed to render a man as savage as the carnivora, while a diet of bread and herbs qualifies him for the life of a recluse. Nor have the prevailing characters of communities failed to be ascribed to this cause; the stolid Scandinavian or philosophical German lives on heavier food and drink than the mercurial dweller of the sunny plains of Italy or Spain, who subsists largely upon macaroni and mushrooms and drinks light wines. Many illustrative facts might be cited from history to show that food largely influences the individual, or as Feuerbach wittily stated it, "Mann ist was er esset;" but comparative physiology demonstrates so clearly this relation existing between food and physical development that no argument is needed to prove such a relation in the case of man, which, moreover, no one probably will refuse to admit.

While the fact has been well recognized for centuries that domestic plants and animals are subject to modification under cultivation, and that most of the species now existing are the results of methodical selection and intelligent supervision, we are very slow in learning to appreciate the fact that man himself can be similarly improved. Some recent experiments upon feeding swine, undertaken under the auspices of the State of Michigan, have shown not only the well-known fact that the proportion of fat in the body is dependent upon the manner of feeding, but also that the vigor and development of muscles and bony skeleton can be varied at will by the selection of appropriate food. Moreover, it was shown in these experiments, as might indeed be expected, that the feeding of the sow, previous to and during pregnancy, had a great influence upon the size and vigor of her litter, and upon their subsequent power of resistance to disease.

It is not intended in this communication to discuss the proper food of man, nor to direct attention to the perfectly familiar effects of well-selected or improper food in health and in disease. Such data are supplied in our text-books. The consequences, moreover, of the neglect to supply proper nutriment are seen most painfully illustrated in many of the manufacturing centers in Europe, and in agricultural districts in times of famine. This paper is simply intended as a reminder that the laws of nature are supreme, a truth to which the glare of civilization sometimes blinds us, but to which we are destined to be rudely awakened unless we are wise in time. The decline in Puritan stock has been the subject of anxious thought in New England, while in France the wisest minds are puzzled to find a remedy for the evident diminution in productivity of French women. While it is true that the artificial condition of modern society are largely at fault, it appears to me that a neglect of dietetics from the physiological standpoint is the great cause at fault, to which all

others are insignificant in comparison. The argument is this: It is natural for women to bear children. If child-bearing is a physiological process (as indeed it is), then women would not object to it as strenuously as many do to-day unless they were in a pathological condition, as in truth many of them are. If their bony skeletons are improperly developed, and their nerves and muscles imperfectly nourished, the fault can only be remedied in one way, *i. e.*, by giving scrupulous attention, based upon scientific principles, to their diet, especially during the early and plastic period of their life, and by the due observance of hygienic laws. During infancy, children should have a food containing all the elements of nutrition in proper proportions. If the mother's breast can not supply it, then science will afford a solution to the problem. In childhood, instead of being allowed to eat food at the common table, whim or caprice of the palate being the only guide, the boy or girl should have food adapted for making bone and brawn. No less attention should be given to the education of the intelligence of the child, but very much more to the development of his physical frame than is usually the custom at present.

The effects of different kinds of food during pregnancy, in the human subject, upon the development of the foetus, has been an entirely neglected field of study. Popular belief, however, holds that the size of the child and its strength are largely influenced by the diet of the mother, and that her unsatisfied desires for certain articles of food may even produce physiological or pathological changes, such as deformities or mother's marks. The theory has been lately advanced that even the sex of the child may be determined in a similar manner. The statement being that by feeding one parent so as to have an excess of vitality over the other, the sex of the offspring will be that of the less vigorous parent. There are some facts offered in support of this which render it very plausible. Such a result, as every one knows, is brought about in this way among the bees. At all events, it shows, if true, the all-prevailing influence of dietetics. If we can, by proper food given to the mother during pregnancy, prevent rickets, defective teeth, marasmus, and all the evils of defective vitality in the offspring, and even influence its sex and development, is not this subject worthy of more attention from the profession than it has yet received? If intelligently pursued with all the light of modern science, may we not hope for the most beneficent results to the race? If neglected, can we doubt that physical and moral degeneration will overcome our highest nations as well as the most ignorant savages?

Is the Gastric Juice a Germicide?—Drs. Straus and Wurtz have conducted a series of experiments in order to ascertain the action of the gastric juice on the bacilli of tubercle, charbon, typhoid and cholera morbus. The juice from man, dogs and sheep was selected for the experiments. It was found that digestion for a few hours at a temperature of 100° F. destroyed all the germs. The bacillus anthracis was killed in half an hour, the bacilli of typhoid and cholera in less than three hours, while the bacillus of tubercle bore digestion for six hours, under which time it was still capable of provoking general tubercular infection. Even when digested for from eight to twelve hours the bacillus was still capable of producing a local tubercular abscess, not followed by general infection. Over twelve hours digestion destroyed it completely. The germicide influence of gastric juice appears to be due to its acid contents, as it was found that hydrochloric acid alone, dissolved in water in the same proportion as it is in gastric juice, proved as active a destroyer of the bacilli. The pepsin appears to have no influence on the germs. MM. Straus and Wurtz, who publish their researches in *Archives de Médecine Expérimentale*, wisely remind their readers that the

germs, when protected by animal and vegetable tissues and introduced into the stomach in ordinary nutrition, are not exposed to so direct and prolonged action of the acid constituents of gastric juice as in these experiments.

Oxygen in Heart Failure and Extreme Restlessness following Surgical Operations.—Dr. W. Duncan McKim read a paper upon "The Present Status of Laparo-Elytrotomy, with Report of a Successful Case," before the New York Clinical Society, November 25, 1889. Dr. McKim's report is as follows:

On the twenty-sixth day after the operation the constantly increasing restlessness not being controlled by morphine, bromides, camphor, chloral, etc., the heart's action being decidedly depressed by them, a cylinder of Walton's oxygen and nitrogen gas was obtained, and the gas constantly inhaled. The relief seemed very marked, the delirium abated, the pulse grew less frequent and stronger, and the rate of respiration fell. The gas was now used as constantly as possible for about ten days, sixteen or seventeen cylinders being used. . . . Of the many remedies used to relieve restlessness and strengthen the action of the heart, none seemed at all effective except the oxygen. When the supply gave out the patient grew rapidly worse, and when once deprived of the gas for eighteen hours she sank so low that I despaired of her recovery. The beneficial effect was so apparent, that the trustees of the hospital resolved to have it employed as long as seemed needful.

Ovariectomy in Japan.—Fifty ovariectomies are reported by Drs. Omon and Ikeda, of Fukuoka. They practise strict antiseptics, using even a spray of two per cent. carbolic acid in the room. Patients are prepared by santaline and castor oil during the last two or three days, because most Japanese harbor lumbricoids. They are bathed on the day preceding and on the day of the operation, and supplied with clean clothing. The operating chamber—consisting of wood and glass walls, and asphalt floor—is irrigated thoroughly, and the instruments boiled an hour and placed in a two per cent. carbolic solution. Dermoid cysts are extremely common—thirty-two per cent. of the entire number. They insure diagnosis by a Pravaz syringe, with which they claim to have punctured the pregnant uterus five times without the slightest damage. The pedicle is always tied with silk and dropped. Eleven cases were double. Operation lasted from eight minutes to one hour and thirty-five minutes. No food or drink first day; milk and eggs second day. Dressing changed if temperature was high. One death occurred among forty-seven cases; the other three were not completed operations. The cases are given in detail, and reflect much credit upon our eastern gynecologists.

Intra-Uterine Infection with Pneumonia.—M. Netter (*Le Progrès Méd.*) related at the Société de Biologie, in Paris, a case of a woman who gave birth to a child when she was suffering from acute pneumonia. The child lived five days, and at the post-mortem examination pneumonia of the apex of the right lung was found, along with double pleurisy, suppurative pericarditis and cerebro-spinal meningitis. A microscopic examination showed the pneumococcus. The rarity of such pneumonia at that age contributes to the support of the conclusion that it was in this case due to infection from the mother. A similar infection of the fetus has been observed in rabbits, guinea-pigs and mice, when the pregnant animal has been infected with pneumonia. It seems sometimes to be the case that the pneumococci may produce pneumonia in the mother and pericarditis in the child; or, inversely, suppurative meningitis in the mother and pneumonia in the child. M. Netter has found only three cases of this pneumonic affection in women.

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EDITORS:

EGBERT GUERNSEY, M.D.

ALFRED K. HILLS, M.D.

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NEW YEAR'S GREETING.

AT THE age of ninety, with the erect form, bright eye and clear voice of early manhood, Peter Cooper stood before a class of young men in that magnificent institution, *Cooper Institute*, which he had erected and endowed for the good of humanity, and gave utterance to a sentiment which was the keynote of his success in life, and had in it the ring and the comprehensiveness of inspiration: "I have made it the rule of my life," he said, "never to receive anything from the world without, at least, trying to return an equivalent." That equivalent was less in the form of charity, though the heart of the wise and tender-hearted philanthropist was always touched at the cry of suffering, but by placing it within the power of those who needed help to become self-reliant, energetic and intelligent toilers in the great life-work, the responsibilities of which rest on every man, woman and child. Cooper Institute was never intended by its founder as a charity, and in the ordinary sense of the word it is not a charity. It is a great educational institution, where skilled labor is taught at such times and in such a way the people can avail themselves of the instruction without interfering with their daily work or without sacrificing one iota of self-respect. In this way the wise philanthropist taught by his own life struggle and the tempest tossed human wrecks with which the world is filled, returned in the kind of help to the poor and to the willing worker which would make them self-reliant in the ability to perform skilled labor, for which there is always a

demand, an equivalent for what the world has bestowed upon him.

It is well to pause at these yearly milestones along the path of life, and turn the thoughts inward and backward in a close and searching retrospect of acts and motives, and weigh carefully the evidence on one side, if such exist, of selfishness, of malice, of hatred, of revenge, and on the other of honest work characterized by devotion to truth, and the building up and maintaining a reputation by merit alone returning a full equivalent for every benefit received. How hangs the scale? Does the evil or the good predominate? How much or how little has there been of kindly feeling, of strict justice to all, of an earnest desire to soften and alleviate the ills of life, to elevate character by encouraging its better qualities and making your influence felt for good in every circle of life in which you are placed? How much or how little has there been during the past year of the grasping hand of avarice, of the attempt to gain selfish ends by misrepresentation and falsehood, to reap benefits when you have sown evil, to gather fame and wealth from a malicious attempt of ruin of character? Conscience is not always dumb, though held in the iron grasp of animal passion, but sometimes breaks its bonds and like a flash of lightning, shining through the black night, illumines with its weird light the most secret resources of the soul.

What principle of honor can exist in the man who seeks only his own ease and whose vision is bounded by what contribute only to his own comfort, or what in the man who is ever ready to receive but never to give, who gathers from the rich treasure house of the world's wisdom the means to insure his own success, but gives nothing in return.

The wants of the world are daily calling for new ideas, for advanced lines of thought, and everywhere, in every department of life, in every field of labor, earnest, self-denying men, impelled less by the love of wealth than by the spirit of progress, the good of humanity and the fascination of unfolding truth, are delving in mines of thought and evolving from the womb of nature those great principles which unlock the door to more harmonious lives and elevates humanity to a higher plane. There is so much good to be accomplished by well directed effort, by practical work whose effects are seen, that the public turn from the mere theorizer, the ever-ready talker, the vapid declaimer, with a feeling of mistrust and contempt, to the practical workers who are giving them something tangible for their confidence and respect, and who are at least trying to aid in some direct way suffering humanity.

Standing in the dawning light of the new year, the *TIMES* sends its cordial greetings to its thousands of friends throughout the world, to whom we can wish no greater happiness and prosperity than that which will flow from the cheerful and religious observance of the rule of that grand old philanthropist, Peter Cooper: "I have made it a rule of my life never to receive a favor from the world for which I have not tried at least to return an equivalent."

THE COLLEGE OF THE FUTURE.

LESS than half a century ago the medical course in all the colleges of this country consisted simply of didactic lectures with perhaps one miscellaneous clinic each week. Of hospital instruction there was so little that the majority of students entered upon their life work with no better preparation than book knowledge, and with little if any clinical instruction except what they had picked up in the office of their preceptor in a country or city practice. Of laboratory and microscopic work there was nothing, and in but few colleges even a distinct class of physiology and in none any physiological experiments. The entire course was taken up with scholastic lectures in the various departments of medicine, a few chemical experiments and perhaps a short time in the dissecting-room. To-day in most of the colleges, certainly in the most popular and the best, the instruction is mostly clinical and in the laboratory. The scholastic lectures are simply the thread around which to crystalize the information obtained in the clinic and the laboratory.

The simple details of surgery, anatomy, physiology, theory and practice, materia medica, pathology and obstetrics can be memorized from text-books just as well as from lectures delivered from the platform, but no text-book, however graphic its pictures, can take the place of the eye, the ear and the touch when brought in actual contact with disease. That school then, whatever its medical creed, will obtain and retain the strongest hold on popular sympathy and support where its laboratory and clinical work are the most thorough and ample. Medical progress during the past fifty years has been clearly along the line of that scientific investigation obtained in the laboratory and in the study of disease and the action of remedial agents upon living tissues, and this study is rapidly bringing the whole medical profession into closer union and more harmonious thought, and giving it something of the standing and dignity before the world of a scientific profession.

We are rapidly reaching that point in college instruction where the elementary knowledge of

the ground work of our profession will be obtained from text-books and memorized at home, leaving the lecture-room for the illustration of the facts stated, so that they will be indelibly impressed upon the mind by the sight, the hearing and the touch. What the student wants and what the college of the future must furnish, are demonstrative facts from which he will be able to form his own conclusions and reach the desired results in any way which seems to him best. Following this course, the college and its student step out of the old rut of dogmatic philosophy into that liberty of thought and logical reasoning which must always flow from scientific investigation, and which makes brothers of all.

In this age of investigation of sharp and energetic action and competition, every means of obtaining practical knowledge must be utilized, every mine of thought carefully worked to insure success. The college professor should give something else from his platform than a rehash of old text-books, which the student is quite as able to read as himself. The student must have practical instruction such as only the sick and the working laboratory can furnish, and failing this he will leave the professors to lecture to bare walls and empty benches.

LOCALIZATION OF BRAIN DISEASES.

IN NO department of our profession, during the past twenty years, has such active, systematic and intelligent investigation been carried on as in the study of disorders of the nervous system, and in none has study been rewarded with such magnificent results. The localization of brain functions is now so clearly established that we can not, only easily trace certain symptoms to the precise diseased locality, but in the majority of cases diagnose the peculiar condition of the organ and the character of the lesion. In 1869 and in 1870 Fritz and Hitzig, of Berlin, commenced a series of experiments which established conclusively the modern doctrine of localization of brain functions. The same line of investigation has been followed by a score of the ablest physiologists in France, Germany, England and America, with the results of establishing, by an unanswerable array of facts, that the anterior portion of each hemisphere is motor, its irritation by electricity causing co-ordinated movement, and its removal producing paralysis in the limbs of the opposite side; that various powers of perception, memory and volition start from a definite locality in the brain, and that each sense has its corresponding area in the cortex and each voluntary movement its point of departure. Irritation or

atrophy of these points would, of course, become apparent in corresponding symptoms, easily recognized by the trained observer. The knowledge which these physiological investigations gives us of the nature and location of brain lesions opens an immense field for therapeutic and surgical aid in their treatment. Brain surgery is now in its infancy, but already the precise locality of tumors have been ascertained and often the offending cause of irritation removed. Even portions of the brain have been excised and the blood clots, caused by ruptured blood vessels, which have produced paralysis of the vocal cords and other organs, removed with complete restoration of the faculties.

The physiological steps through different lines of investigation, all developing the unmistakable fact of the localization of the areas of sensation and motion in the brain and also of the various mind faculties, are so familiar to the profession as to require only a brief reference. The white matter of the brain beneath the cortex is seen, not with the naked eye but under the microscope, to be nerve fibers, conveying the impulses of the molecular changes ever going on in the gray cells to different organs. Although it is impossible to separate even with the microscope in the adult brain the bands of fibers functionally related and running together in tracts, Flichsig made the discovery in 1877, which has led to such splendid results in brain study, that in fetal life the fibers which were functionally related developed simultaneously and in the direction which they were destined to transmit impulses; each tract having its own time and direction of development. In this way the exact course of the nerve fibers could be traced. In 1878 Brissand demonstrated that after certain limited brain lesions the tracts in the whole matter corresponding with the functional tracts differentiated by the methods of Flichsig showed marked evidences of degeneration. In 1870 Von Gudden noticed that when the eye was extirpated in an animal at birth, the nerve connected with the organ failed to develop, and hence by its atrophic appearance in the animal can be distinguished from the corresponding nerve of the opposite side and the course of each traced. The lines of investigation marked out by Flichsig, Tuick, Brissand and Von Gudden, have thrown such light upon intra-cerebral tracts as to point out to a certain extent the areas of the brain and the nerve fibers by which they are joined to separate organs.

It is evident that if disease of the brain could be accurately located during life, and its real character ascertained, it would point out the limit of

therapeutic and surgical aid to which our present knowledge extends.

In the study of cortical disease general symptoms must of course be differentiated from local symptoms. The latter may be divided into symptoms of irritation and those of destruction. An irritative lesion produces symptoms due to the increased activity of the area affected easily differentiated from the destructive lesion, which is marked by a loss of function in the area involved, as paralysis, anesthesia, blindness, deafness, loss of smell and the use of language. It will be readily seen that notwithstanding the triumphs of modern brain surgery and of brain therapeutics, as shown by specialists of nervous diseases and in insane hospitals, there is a limit to human aid, and there are certain conditions of the brain to which the alienist can point with unerring certainty as being outside the boundary of medical or surgical skill. What drug so potent that it can bring back strength to blood vessels weakened by atheromatous, or calcareous degeneration, or kindle into active life the organ atrophied by the shutting off of its blood supply? These organic changes of brain structure, some of them easily recognized, enables the alienist to say in these cases the only power which can ever rebuild these mental ruins is *death*. That it is the duty and should be the privilege for every State to care for these wrecked and ruined minds for which there is no hope, in such a way as will best contribute to their comfort, there can be no doubt. But should there not be a double duty, one for the hopeless and another for the storm-tossed brain, which human skill may be able to guide into smooth seas and into a safe harbor. The one class is virtually dead to the world, its work, its hopes, its sympathies; the other, with the possibility and sometimes the certainty of coming out of the darkness into light, from the wild storm and the fearful discord into harmony and clearness of intellect by which it can again take up the responsibilities of life. In the Insane Hospital at Middletown a paper is published called the *Conglomerate*, edited, and the articles, except an occasional one on special subjects, written by the patients. In the issue of December 17 there is a little poem written by a patient which we give below. According to the present law, if this patient were to apply for admission into one of the State hospitals side by side with one whose brain was so disorganized that there could be no possible help, one for whom hospital care would be utterly useless, the doors would be thrown wide open to the pauper, even though his case presented not a vestige of hope, and closed against the brilliant intellect with only

here and there a discordant note which hospital care could soon bring back to harmony. Both must be paupers, or the great State of New York closes the doors of its hospitals sternly against them.

Picture to yourself the tottering and decrepid idiot, brought to his condition by vice, standing at the door of a State hospital—not an almshouse—but a hospital, side by side with the author of the "Wanderer's Star," and received, while the other is turned adrift, and we mistake human nature, we mistake the spirit of justice of the Empire State, if this mighty wrong is not speedily remedied.

THE WANDERER'S STAR.

Is there never a star for a wandering race
O'er the ocean and desert of pain?—
That, turning their eyes to its heavenly place,
They may go on their journey again?
There is always a rest that a mortal should find,
A goal that his spirit has lost;—
Was a star ever fixed for the wandering mind,
On the sea of illusions tossed?

Is there anything lost in the universe fair?
Though everything pass from our sight.
Is there never a time when they all reappear,
Like the orbs of approaching night?
For is this not a world of Justice, ours,
Where the reign of her law is sure?
While our hopes and our loves are but borrowed powers
From a Giver whose gifts endure?

Ah, the lost of this race are as thick as the sands!
But the Heavens are measureless, too;
And a star for each soul in all human lands
To the infinite Host are but few.
O, the star of their hope, see it rising to-day!
Its glitter is seen on the sea;
It brightens, it gathers, yea, ray upon ray,
While Error and prejudice flee. W. B. W.

THERMAL SPRINGS.

AT a recent discussion in the Post-Graduate Clinical Society on the therapeutic value of the waters of the Hot Springs of Arkansas, Dr. Keyes expressed the conviction, based upon several years of careful observation, that the value of the waters could not be ascribed to any mineral ingredient, but rested entirely in the nature of the heat, which was entirely different from that obtained in any other way, producing prompt diuresis and diaphoresis at a temperature when ordinary hot water had no effect. To the tonic action of the heat, stimulating the appetite and the various functions, assuring the prompt elimination of mercury and the iodides, and permitting those drugs to be pushed in larger doses than at home, Dr. Keyes attributes the beneficial action

of the waters, and thinks they should be used only in late severe lesions, when the patient can not at home tolerate sufficient active medication to produce a cure.

Dr. Charles Dake, of Hot Springs, and his father, Dr. J. P. Dake, of Nashville, both of whom have had ample opportunity of watching the effects of the baths, from a thoroughly scientific standpoint, and from a very careful and intelligent observation, while agreeing with Dr. Keyes upon the peculiar effects of the heat of the waters, believe that their remedial value in many cases is not confined to the heat qualities alone, but is clearly traceable in part to the mineral ingredients they contain, and that the waters are not only active stimulants to all the functions, increasing the appetite, and eliminating through the skin, the lungs and the kidneys morbid products, but in the sileceous materials they contain are cell builders also. Hence they find under the use of the waters a building up and repair of tissues such as we expect to obtain from such agents in their homœopathic administration, and which, in the perfect solution in which they exist in the hot water, are more easily taken up and appropriated by the vital economy. From our own observation of a variety of cases which have been treated at the Hot Springs of Arkansas, we have secured what seemed to be conclusive proof of the medicinal action, and that of a curative character, of the mineral ingredients contained in the water. In the use of chalybeate waters we get the effects of iron in a more marked degree on account of the perfect solution in which it is held than in any of the delicately prepared compounds of the laboratory, and if the mineral substances contained in the waters of Hot Springs have an action and a use in the animal economy, and of this there can be no doubt, their curative action is much greater than that attributed to them by Dr. Keyes, and are adapted to other diseases than syphilis and rheumatism.

MINNESOTA STATE ASYLUM.

DR. A. P. WILLIAMSON, Superintendent of the State Insane Asylum of Minnesota, at Fergus Falls, has issued his first annual report of the institution which was opened July 25, 1890, with eighty-five patients. Only a portion of the buildings are yet completed, but Dr. Williamson is entering upon his work with his characteristic energy and intelligence. As chief of staff of Ward's Island Hospital, Dr. Williamson showed an executive ability which received the warm commendation of the Commissioners of Charities and

Corrections and of the Medical Board, and as first assistant of the Middletown Insane Hospital he was recognized as an able diagnostician, a clear and practical thinker, thoroughly imbued with the love of his profession. Dr. Williamson has carried with him to his new field of labor a practical experience in drugs, in hygiene, in psychology and in adapting every available means to ends in untangling the meshes of disordered intellect which will enable him to make a record in the cure of patients which will compare well with older institutions.

Alienists the world over are recognizing that drugs form only a small part of the treatment of the insane, and in a more minute study of nerve cells and their molecular changes in the production of thought are learning the reciprocal influence of soul and mind and matter one upon the other, and how to unfetter the vital force so that it will clear away all obstructions and bring back harmony to the organism. The alienist, in working out his great problem, is catching hold of the real spirit of Christianity and placing it in antagonism with the old doctrine of brute forces. To him man is no longer a machine made up of blood and bone and tissue, but a trinity of soul and mind and matter, and the more closely each is studied and the relationship existing between them the more successful can the remedy be applied. This is the great secret of the unequalled success which has been obtained in the public institutions in our school in the treatment of nervous diseases. Our alienists have risen above the plane of mere materialism and have recognized the triune action of soul and body and mind, and have found their remedies not alone in drugs but in the facts and deductions of psychology and mental philosophy.

KOCH'S LYMPH.

EXPERIMENTS have been made during the past month by a number of physicians upon patients in different hospitals—upon tubercular patients—with Dr. Koch's lymph, and the results carefully watched and noted. It is still too early to define accurately the value of the new remedy, or to individualize the precise conditions in which it will be most beneficial. Sufficient has been demonstrated, however, to show that phthisis in its first and early in its second stage show the reaction described by Koch, sometimes in thirty hours after the application, and in most cases after the second or third inoculation. These symptoms are looseness of the deposits in the lungs which are coughed up without great effort

on the part of the patient, and an increase in the quantity and thinness of the sputa.

Laryngeal cases of moderate severity show very decided reaction. In some cases the reaction after any particular dose may be moderate, though a repetition of the same dose, even after an interval of a day, may show a very severe reaction.

Lupus cases show a steady improvement, and, so far as the observations of the experimenting physicians have gone, lupus appears to be far more susceptible to the lymph treatment than are other tuberculous diseases.

In regard to the condition of the patients who have been treated with lymph, the pulmonary cases especially show that the lymph apparently has a tonic effect. The patients say that they feel better than they did before the lymph was used. In cases of tubercular affection of the bone tissues a diminution of discharge of pus from the wounds has been observed, but the trial has not been of sufficiently long duration to enable any permanent conclusion to be reached. The lymph shows a cumulative action, and it is necessary that the repeated inoculation should be made with great care to prevent bad results. So many applications have been made to Dr. Koch from this side the water, that he has called upon Minister Phelps to inform him that it will be impossible to depart from the principle of giving the lymph to hospitals only.

It may be of interest to the profession to know that the certificate of incorporation has already been approved by Judge Andrews, of the New York Bacteriological Institute, which will be established for the "study and gratuitous treatment of contagious diseases, comprising a Pasteur and Koch department for the treatment of hydrophobia and tuberculosis."

The impetus which the investigations of Pasteur and Koch have given not only to the study of bacteriology, but to the formulating of remedial agents in ptomaines and leucomaines and various forms of germ life based upon the very principle which Hahnemann seized hold upon and made the corner-stone of a scientific therapeutic, can only result in good in sifting out of simple theory the grains of truth and crystalizing them into practical use.

Koch claims that his lymph has no value in syphilitic conditions, and that it does not kill the tubercular bacillus, but only the diseased tissue; if this is the case the *cyanide of gold* can not be one of the ingredients, as is claimed by some, for this drug would kill the bacillus and is one of the most active agents in tertiary syphilis, especially of the tubercular kind, we possess.

In view of the fact that Dr. Koch has not yet completed his experiment, and that it would be unwise for him to disclose the secret of his remedy until he can define just in what conditions it is applicable, the suggestion of Mr. Platt, of Connecticut, that our government offer \$10,000 for the formula, is premature. When the proper time arrives there will be no secret in the formula of the drug, and we shall know precisely what it will accomplish.

INTERNATIONAL HOMŒOPATHIC CONGRESS.

THE International Congress will take the place this year of the usual meeting of the American Institute of Homœopathy, and will meet at Atlantic City June 17th, and continue in session one week. Membership is restricted to homœopathic physicians in good standing in recognized Homœopathic Medical Societies, and in places where such societies do not exist, to physicians with suitable credentials. Delegates will be received from any homœopathic institution, and visitors of all schools will be admitted as spectators. As this is to be distinctly a homœopathic congress, the subjects for examination will be confined especially to that branch of the profession, and will include a resumé of homœopathic news throughout the world, and essays and discussions on materia medica, homœopathic therapeutics in surgery and in special germs of disease. We sincerely hope that as the essays and discussions are to be distinctly homœopathic in character, that the best work of the school will be brought out in this speciality in therapeutics, looking more to facts and scientific lines of thought than to self-glorification and in sounding vigorous notes of prophecy. Let the congress from a scientific standpoint be such as to command the respect of scientists throughout the world. The *TIMES* accepts the invitation of the managers of the congress to comment on its proceedings, which it will do, as is its custom, fairly, honestly and without fear or favor solely in what it considers the interests of truth and science. Communications may be sent to the chairman, T. Y. Kinnie, M. D., Patterson, N. J.

INDIVIDUALISM.—Dr. Handfield Jones, in his eloquent address before the St. Mary's Hospital Medical School, London, defines genius as the highest product of individualism, and says that, while few human beings reach genius, no human unit is without his share of individualism, and it need only that he be true to himself to develop it. Every man, whatever his station in life, is endowed with a personal equation of thought. He

can either simply store the raw material of facts and ideas as they are presented to him by others, or he can digest and reproduce them stamped with the seal of his own individuality. It rests with ourselves either to be mere echoes of knowledge or living voices, recording our own gleanings of truth for the help of coming generations. A man has made a tremendous stride when he has learned to have the courage of his convictions, and although he may have all due respect and reverence for great names, still he has not reached the first stage of progress until he has subordinated that reverence to a profound respect for his own individual opinion. Think, weigh, analyze rather than repeat, parrot like, the unsupported assertions of others.

WE ARE informed, upon the best authority, that there is a strong and increasing minority in the West in favor of medical union and the abolition of all sectarian titles with physicians, and we are assured that the time is nearer than we dare think, when this condition will be brought about. It is stated that even the American Medical Association is tending that way, to all of which we say, Amen!

COL. CHARLES SUTHERLAND has been appointed Surgeon-General in place of Col. Baxter, recently deceased. Col. Sutherland's connection with the army dates from 1852. After serving through the war, Dr. Sutherland was brevetted lieutenant-colonel and colonel for faithful and meritorious services and diligent discharge of duties. The new Surgeon-General enjoys the confidence of his army colleagues, and is held in high estimation by the profession generally. The place so ably filled heretofore will in the hands of the new appointee show no falling off in energy and intelligence.

WE learn from the Commissioners of Lunacy, that 1,741 of the 2,050 insane patients in the county alms houses of the State have been removed since the first of October to the State Hospitals, leaving in the county care only about 1,100. Of these, accommodations in the State Hospitals will be found for 175 and the State called upon to make appropriations for the rest in small cheap buildings in connection with the hospitals. To accomplish this work has necessitated the closing of the State Hospitals to all new admissions except to the indigent and pauper, a defective and hasty legislation which is working great inconvenience and injustice, and which we are confident has only to be brought before the legislature to be remedied. The change from county to State is a most desira-

ble one, but first let the accommodations of the hospitals be sufficiently increased to accommodate all who apply. If the necessary appropriations had been made last winter and the work commenced at once, the buildings by this time would have been ready for the reception of patients. The grand idea of making the pauper insane the wards of the State in its hospitals could have been carried into successful operation without the slightest friction or working the least injustice to any. We have no doubt this winter this plan will be rounded into full and just completion.

IN OUR commendation of the new Medical College, at Cleveland, we had no intention of reflecting unpleasantly upon the "Homœopathic" Hospital College of that city or upon any of its able corps of teachers, for whom personally we have the highest respect.

We know nothing of the cause which led to the rupture in this case, but it has been intimated that it was something connected with the chair of materia medica. Prof. Kraft, the new incumbent of this chair, will please accept our assurances that no personal reflection upon him was intended, for we have every reason to think that he is a most able teacher in the department which he assumes.

BIBLIOGRAPHICAL.

A TEXT-BOOK OF MATERIA MEDICA PHARMACOLOGY AND SPECIAL THERAPEUTICS, WITH MANY NEW REMEDIES. By I. J. M. Goss, A. M., M. D. Second Edition. Chicago: W. T. Keener.

The author defines Eclecticism, from which standpoint the work is written, "as being based upon opposite reasoning from the homœopath or allopath, viz., that when medicines are introduced into the system they have an affinity for certain parts of the organization upon which they have a specific action. To remove the disease the remedy need not create another disease, but should act as a sedative or stimulant, and increase or diminish the nutrition in the part affected according as the disease may be one that stimulates or depresses the organ affected. Hence Eclecticism discards the idea of the necessity of producing one disease to cure another, but urges the truth of there being a specific affinity in every known remedy. * * * It is evident that the science of medicine can not be confined to dogmatic rules. The old idea of forcibly expelling disease from a human body by medicines as we would drive from the house a thief is fast passing away. We are beginning to learn that disease is an impairment of vitality; that the causes of disease are depressing and continually lower the various functions, consequently all agencies employed to cure disease must act in one of two ways: to remove the depressing cause and to increase the vital force so as to increase resistance to morbid influences."

We have quoted at some length from the author's preface, as it gives a very fair idea of the distinctive views of the Eclectic. Dr. Goss freely utilizes the researches of such men as Potter, Ringer, Brunton, Phillips and Barth-

olow, of the Old School, and of some of the leading homœopathic writers, and also draws liberally from his own experience and the published writings of prominent men of his own school. The result is a very suggestive, practical and useful volume.

A CLINICAL MATERIA MEDICA. Being a Course of Lectures Delivered at the Hahnemann Medical College, of Philadelphia, by the late E. A. Farrington, M. D., Reported Phonographically and Edited with the Assistance of the Lecturer's Manuscript. By Clarence Bartlett, M. D., and Revised by S. Lilienthal, M. D. With a Memorial Sketch of the Author, by Aug. Korndorfer, M. D. Second Edition. Philadelphia: Hahnemann Publishing House, 1890, pp. 770, octavo.

The work under review presents the best study of drug effects for application according to the plan of Hahnemann, with which we are acquainted, and follows very much the same mode of analysis as was done by Hempel in his materia medica.

The narrative form of weaving symptoms of drugs together, with suitable comparisons one with another, is far more useful and interesting to the student than bare symptomatology. The author of this book had the happy faculty of doing this sort of work, although, sometimes, like all enthusiasts, he may have carried it too far, in respect to comparisons. Comparative materia medica to be of service must be sharply defined and to the point, and not too long drawn out. We commend the book especially to those who desire a basis upon which to prescribe according to *similia similibus curantur*.

Dr. Clarence Bartlett, the editor, is to be congratulated for his part of the work, which is excellently well done, and this the second edition which has been called for within a very short time, has been thoroughly revised and many additions made with a view to keeping the text abreast the times.

The work must be a text-book of the first importance in the medical colleges to which it is adapted.

"THE TALLEYRAND MEMOIRS" in *The Century*.

The Century magazine is running a fast press day and night in order to print the first installment of the delayed "Talleyrand Memoirs" in the January number. This same magazine was the first to print, before its appearance in France, the life and literary remains of the great French artist, Jean Francois Millet, and now *The Century* is to bring to light, before they appear in any other country, the long-hidden memoirs of the most famous of French diplomatists. This first article will be preceded by what is said to be a brilliant pen-portrait of Talleyrand, by Minister Whitelaw Reid, who has made the selections from the most interesting chapters of the first volume.

THE PRACTICE OF MEDICINE, OR THE SPECIFIC ART OF HEALING. By I. J. M. Goss, A. M., M. D. Chicago: W. T. Keener.

The author's line of reasoning in selecting his therapeutic agents is concisely given in his introduction. "Medicines," he says, "have a dual action whose toxicological effects are just opposite to their therapeutical effects, hence the absolute necessity of small doses. A drug has specific action upon an organ, tissue, or part, in a given dose, but that action is quickly changed by giving large quantities. As all active remedies are possessed of pathological as well as remedial powers, the action of drugs is materially changed by a change of pathological conditions in each case of disease. As many diseases are of germ origin, and the results of specific poisons in the blood, it may be necessary to combat these septic elements in the blood upon the law

of *contraria* instead of *similia*. The best success requires that the prescriber should recognize the relationship between the lesion and the remedy he employs." Dr. Goss shows in his work extensive reading, a large and intelligent experience and a concise and very clear handling of his subjects. The work is full of practical suggestions to the thoughtful physician.

A CLINICAL STUDY OF DISEASES OF THE KIDNEYS. By Clifford Mitchell, A.M., M.D. Chicago: W. T. Keener.

The author states the object of his work is to show the practical bearing of thorough examination of the urine on the diagnosis, prognosis and treatment not only of diseases of the kidneys themselves, but of many other diseases. Exercise, diet and climatic influences are carefully studied in the causes and treatment of the diseases brought under consideration. The work is thoroughly practical, and shows careful and intelligent study and observation.

THE PHARMACOLOGY OF THE NEWER MATERIA MEDICA, embracing the Botany, Chemistry, Pharmacy and Therapeutics of New Remedies. Being the Results of the Collective Investigation of New Remedies under the "Working Bulletin" System, Properly Arranged, Classified, Indexed and Placed at the Disposal of the Medical Profession. Issued in Monthly Parts. Detroit, Mich.: George S. Davis.

Part VIII. contains *duboisia*, *eucalyptus globulus* and many others. Intending subscribers should send early in order to get back numbers before they are out of print.

THE RUBRICAL AND REGIONAL TEXT-BOOK OF THE HOMŒOPATHIC MATERIA MEDICA. Section on the Urine and Urinary Organs. By William D. Gentry, M. D. Philadelphia: Hahnemann Publishing House, 1890, pp. 239, 8vo.

This book, as its title indicates, is an arrangement of the symptomatology of the homœopathic *materia medica* relating to the urinary organs. It will be found of service by those who prescribe according to Hahnemann's plan.

"THE MEDICAL BULLETIN'S VISITING LIST AND CALL RECORD" AND THE "PHYSICIANS' ALL-REGISTERING TIME AND LABOR-SAVING ACCOUNT BOOK," being a Ledger and Account Book for Physicians' Use. F. A. Davis, Publisher, Philadelphia.

These books reached us too late for December notice. The Medical Bulletin and Visiting Lists is similar to other visiting lists. The Physician's All Labor-Saving Account Book is superior to anything before the public. We can not imagine anything more compact, so compact, in fact, and easily kept that a business of almost any amount can be registered in all important details with only a few moments daily attention.

The Open Court Publishing Company, of Chicago, will publish immediately in two handsome volumes a new translation of the "Last Manuscript," by Gustav Faeytay.

The University of Pennsylvania makes announcement concerning a new departure in the publication of the "University Medical Magazine." A proposed department will contain a summary of the progress of medicine abstracted from the most important foreign journals as well as the progress of medical sciences in this country. The eminent gentlemen who edit the several sections will select from the abstracts made by their assistants those portions which shall in the most satisfactory manner present the

current literature of the day. The fact of their being teachers in the university of the branches which are thus edited we believe will render their judgment in culling that which is most essential of the highest value. The exchange journals of the "University Medical Magazine," and all journals which come to it in any way, will be examined and translated and finally deposited on the shelves of the library of the University of Pennsylvania, which is at all times accessible to the public. This enterprise thus serves a double purpose, and we believe will render valuable service to the profession.

CORRESPONDENCE.

THE TWO-FOLD ACTION OF MEDICINES.

To the Editors of the New York Medical Times:

In the *Times* and *Register* of December 6, Dr. Boardman Reed, writing on "Cupric Arsenite for After-pains," gives the details of half-a-dozen cases, and concludes as follows:

"Many other physicians in this country, and some very prominent ones in Europe, have since used the drug successfully, and reported their results. So far as I have observed, however, no one of them has yet given an explanation of the *modus operandi* of small doses of arsenite of copper in curing vomiting, diarrhoea and violent colicky pains in the alimentary canal, as well as cramp pains in other parts, when the physiological effects of the remedy are known to be violently irritating. . . .

"Now, as the gentlemen who have been writing so ably about the arsenite of copper have, so far, not explained how the small doses employed have exerted curative effects directly opposite to those well known to result from toxic doses of the same and of its constituent metals, there is danger, on the one hand, that many physicians will disbelieve the reports; and, on the other hand, that our homœopathic brethren will claim the cures as exemplifications of their incomprehensible and altogether unscientific dogma of *similia similibus curantur*.

"Hence, it seems to me wiser to explain that all such curative effects of comparatively small doses of medicines, including the familiar use of two-grain doses of quinine as a tonic, when drachm doses of the same will depress and almost paralyze the nervous system, are instances of the general principle that all tissue-disturbing remedies, whether drugs, massage, electricity or hydropathic measures, are capable of exerting two opposite effects according to the dose administered. The effects of the small dose are opposite or antagonistic to the effects of the large dose, and, therefore, antagonistic to such diseases or lesions as are capable of being produced by the large dose.

"For instance, large doses of quinine are capable of causing profound debility. Therefore, small doses of quinine may be depended upon as a remedy to antagonize and thus cure debility. In like manner digitalis, in the largest doses, or pushed too long even in moderate doses, is capable of depressing the heart, finally, as demonstrated by Nothnagel and Rossbach, causing it to stop, in the case of warm-blooded animals, 'paralyzed in diastole.' Therefore, small or moderate doses of digitalis, not continued too long, may be depended upon to antagonize cardiac weakness. There is no *similia similibus* about it, but always *contraria contrariis*. All of us are constantly using scores of remedies in this way, and the same may be said of the physicians who practised hundreds of years before homœopathy was invented."

When that veteran homœopathist, Dr. William Sharp, of London, England, first propounded the above theory of the two-fold action of medicines—years before it was taken up by Dr. Reed—he tried to make it the foundation of a new system of therapeutics, which he denominated

Antipraxis. His colleagues refused to adopt it, for the reasons, as stated by Dr. Dudgeon, that it did not apply to drugs universally, and, anyhow, would not make the slightest difference in the practice of medicine according to the Hahnemannian rule! Now, however, that it is reaffirmed, in the broadest terms, by a prominent writer of the Old School, it is not to be put aside so quietly. If "all of us" (i.e., of allopaths) are constantly using scores of remedies in this way, then "all of us" are constantly practicing homeopathy, whether under that name or any other. This being the case—for surely Dr. Boardman Reed must know whereof he speaks—was ever anything more absurd, since the metaphysical contests of the Dark Ages, than maintaining a warfare about the truth or falsehood of the doctrine "similia similibus," when it might just as well be called "contraria?" The therapeutical fact, so long and so strenuously denied by a majority of the profession, being now unreservedly acknowledged, and their practice having changed in conformity therewith, what reasonable excuse can be alleged for keeping up sectarian distinctions founded solely on a mere hypothetical explanation of that fact? "Let us have peace!"

E. D. N.

TRANSLATIONS, GLEANINGS, ETC.

RETROSPECTIVE THERAPEUTICS.

BY ALFRED K. HILLS.

Electricity for a Felon.—D. D. Martin, M. D., in *Medical World*, December, 1888. By electricity, used as follows, a felon is destroyed with lightning speed. Use a good galvanic battery with ordinary power, then fill two glass dishes or cups with water, place the finger affected with the felon in one cup, in which you have placed the positive end of the electric wire; then place the next sound finger in the second glass cup, in which you have inserted the negative pole; continue passing the current for twenty or thirty minutes, and if required repeat this once in four or six hours. The pus that is exosmosed through the periosteum will appear as a small pimple at the skin in a few days, and may require to be pricked with a needle.

New Zealand Flax as a Healing Application.—The *Therapeutic Gazette* says: Somewhere about the year 1869 or 1870, a letter appeared in the *Melbourne Argus*, signed by Mr. Francis A. Monckton, bearing witness to the extraordinary healing properties of the *phormium tenax*, commonly known as New Zealand flax. From that time until the present he has used it in hundreds of cases, including lacerations and amputations of every description, and he has no hesitation in saying that there is nothing known in the old world that can equal it in producing healthy granulations (*Australasian Med. Gazette*, January, 1885). Mr. Monckton uses a strong decoction—the stronger the better—made from the roots and butts of the leaves, boiled for twelve hours. At one time he had to make it fresh every second day, as it readily ferments and deteriorates; but since carbolic acid came into vogue, he keeps it for any length of time by adding about an ounce of equal parts of carbolic acid and glycerin to every quart. Mr. Monckton says he requires no other antiseptic precautions, but simply syringes the lesions occasionally with it, and maintains cotton-wool or lint soaked in it constantly to the parts affected. If there are no foreign matters to be discharged there will be no discharge, in support of which he instances the case of a man whose forearm he lately amputated after it had been shattered through dynamite. The ligatures were thirty-two days in coming away, and the amount of pus from the operation up to that time would not amount altogether to a tablespoonful. The

same patient had the soft parts of the other forearm torn and blown into such a mass of shreds that the members of the staff thought it was hopelessly lost beyond repair. Mr. Monckton asserts that with the same treatment it became as sound and useful as before, and exhibits only scars, showing where new skin had been formed.

Green Coffee in Affections of the Liver.—Dr. Landarabenco, of Barbaste (*Journ. de Méd. de Paris*, May, 1890), has directed his attention to the therapeutic uses of green coffee in gout, gravel, nephritic colic and migraine. The coffee as employed is mixed thus: Martinique, one-half; Mocha and bourbon, of each a fourth. Portions of these mixed coffees, twenty-five grammes (3 vj.—gr. xxv.) each, are put into a glass of water, covered as closely as possible, and macerated from ten to twelve hours, or more. In the morning, stir the contents of the glass, strain it, and let it be drunk on an empty stomach, cold, and without sugar. Food may be taken shortly afterward. The therapeutic results are said to be in the highest degree satisfactory.

Wines and Liquors in Medicine.—Alcohol, in its various forms, as brandy, wines, etc., can be used in cases in which it is indicated according to the law of similars, with as good results as other remedies show (*Hom. Physician*).

Brandy-drinkers are liable to cancer of the stomach, in which there is intense burning pain. A few drops of brandy in half a tumblerful of water will relieve, temporarily, this intense burning. Drinkers of Rhine wines are prone to bladder troubles. Of this fact we may make use. Madeira wines cause affections of the heart. A spoonful of Madeira wine will often relieve the more grave symptoms of organic heart disease.

The continued use of whiskey, as is well known, causes cirrhosis of the liver and of the kidneys, and gives rise to a train of symptoms which should be sufficient to keep any one with this knowledge from becoming a whiskey-drinker.

Where poverty of the blood exists there is nothing to compare to red wines, and our own country now furnishes as good wines as can be found. Egg Harbor, New Jersey, now produces wines equal to Burgundy, in being full-bodied and generous, and we know of no native wines that are at all comparable with them. This subject deserves fuller treatment.

Apples in Dipsomania.—Dr. R. B. L. Triplett (*Med. Bulletin*) calls the attention of the profession to a fact that he has been experimenting on for years, as follows:

I first noticed (he says) that those who were habitual drinkers of alcoholic liquors very seldom ate apples, and by applying this hint clinically, found that a diet composed largely of good, ripe apples (of the tartish variety, preferably) greatly diminished the desire for the accustomed stimulant. In truth, of late years, I always insist, when treating dipsomaniacs, that apples shall be taken with meals and between the meal hours, and find that where it is kept up the desire for alcoholic stimulants soon becomes nil.

I have used strychnine and other vaunted remedies in dipsomania, but have had more satisfaction, and much more brilliant results, from the apple diet than from any remedy in the materia medica.

Would like other physicians to give it a fair trial and publish their results. Of course other nourishment is given, only I insist that apples be taken as above. Some of my cases are those in good circumstances; others of those of the poorer class.

Hot Water for Sleeplessness.—A lie awake of twenty-five years standing, who for ten years thought himself happy if he could get twenty minutes sleep in twenty-four hours is thus quoted by the *Medical Age*: I took hot water—a pint, comfortably hot, one good hour before each of my meals, and one the last thing at night—naturally unmixed with anything else. The very first night I slept for three hours on end, turned round and slept again till morning. I have faithfully and regularly continued the hot water, and have never had one bad night since. Pain gradually

lessened and went; the shattered nerves became calm and strong, and instead of each night being one long misery spent in wearing for the morning, they are all too short for the sweet, refreshing sleep I now enjoy.

Ipecacuanha in Insect Bites.—Dr. Neal recommends the use of ipecacuanha in all cases of insect bites, and states that recently a patient traversed India, bidding defiance to mosquito bites with the following application: B. Pulv. ipecac., ʒss.; spt. vini rect., ether sulph., aa ʒss. M. This is well worth knowing outside of India.

Arsenic in Cystic Goitre.—Dr. Snow (*Brit. Med. Jour.*) speaks highly of arsenic in cystic affections of the thyroid gland. In one case in which he employed the drug the thyroid enlargement entirely disappeared. In two other cases the improvement was very marked in a short time, but the patients ceased attending very soon after the treatment was beginning to show its influence.

Gelsemium for Irritable Bladder.—Prof. Bartholow states: Gelsemium will often do more good in irritable bladder than any other remedy. It is especially adapted to those women of hysterical type, troubled by irritability at the neck of the bladder, calling for constant urination.

Chrysophanic Acid in Disease of the Eye and Ear.—In a talk before the Medical Society of the State of Ohio recently, Dr. G. C. McDermott observed that chrysophanic acid is not appreciated to the extent it deserves in diseases of the eye and ear. Used either locally or internally, or both, it is a magnificent remedy for the large majority of cases where a filthy, scabby condition exists with a tendency to the formation of thick crusts. He had had cases in which the whole ear and the surrounding tissue appeared to be one great scab, from the center of which oozed the pus which came from a suppurative otitis media, and on using the remedy both locally and internally he had seen the whole condition melt away in two or three weeks. Recently a like condition of the skin of the eyelids and part of the face disappeared in less than one week under this treatment. For external application he uses a salve made of vaseline in the proportion of from four to eight grains of the drug to the ounce, carefully rubbed up in a mortar.

Medical Treatment of Incipient Cataract.—E. W. Beebe, *Am. Inst. of Hom.*, 1890. . . . But two conditions are necessary to successfully combat this much to be dreaded affection; First, Patients must present themselves for treatment on the first appearance of opaque lens fibers. Second, It is necessary to individualize cases and to carefully select our remedies to meet the peculiarities of each particular case.

When these conditions are carefully complied with, we can offer a reasonable assurance that further progress of the cataract will be checked, which in such cases is equivalent to a cure.

If, however, treatment be delayed until the lens substance has become more or less opaque, and vision greatly impaired, treatment will be disappointing; or if one expects to find a specific remedy for the many varieties of the affection and to use it indiscriminately, or without due regard to causes and conditions, he will undoubtedly arrive at the same conclusion that our friends of the Old School have, and denounce those who advocate treatment by remedies administered internally as fit subjects for a lunatic asylum.

When, however, sufficient care is given to the selection of our remedies, I know of no other condition which is so serious in its results when neglected, that is easier of management than this; but we must never lose sight of the fact that the opacity of the lens substance is *not* the disease; that it is but a single symptom of a diseased condition, and is the result of such abnormal state. . . .

Surprising results frequently follow the administration of the indicated remedy in incipient cataract, and the improvement thus obtained is quite as permanent as that ex-

perienced in other chronic affections. In a paper which the writer had the honor to present recently several cases were detailed which had been successfully treated at periods varying from three to ten years previously, and so far as I have been able to learn, these still retain the benefits received at that time.

Soden Pastilles in Chronic Throat Affections.—Compressed pastilles of soden water are now well appreciated by the profession, and are used almost to the exclusion of the bottled waters in this country (*Journal of Balneology*, October, 1890). They are made from two of the well waters, and contain a large amount of chloride of sodium; they are particularly serviceable in chronic throat affections. The following case, which was reported cured of a most obstinate pharyngeal catarrh, will illustrate: Mrs. K., a widow, forty-six years of age, has just passed the climacteric, and during which she has had the most pronounced nervous phenomena. Of these symptoms she was gradually improving when she consulted me in reference to an aggravated condition of an old chronic pharyngeal catarrh. Since the cessation of the menstrual flow the irritation and discharge from this source has become so persistent, unpleasant and abundant, that it made her life miserable. She was ordered the pastilles, to be taken six times a day, slowly dissolved in the mouth. The discharges at once commenced to become thinner, the irritation became less, and in two months all of a disease which had lasted for years was gone. One of the pleasantest features of the treatment was the entire relief of the nervous phenomena that had been so persistent from the first.

Mrs. D. was also cured of a chronic nasal catarrh wherein the pastilles were given three times a day, and a pastille dissolved in a teacupful of water and snuffed up the nostrils,* warm, twice a day. The benefit was at once marked, and the relief permanent.

In clergyman's sore throat the most delightful results are claimed.

In chronic bronchitis they will thin the thick tenacious mucus, it is said, as no other remedy will, and relieve the irritation when nothing but opium had hitherto been of any avail.

Permanganate of Potash in the Treatment of Small-Pox.—M. Galewowski, of Paris, reports that in the small-pox hospital at Brunn, in Austria, baths colored red with permanganate of potash are used for the treatment of small-pox. It is stated that after a short stay in the bath the temperature of the patient falls materially, his general health is improved, the pustules are resolved, and recovery sets in.

Electric Light as an Anodyne.—Dr. Stanislaus Th. Von Stein reports (*Meditzinskoje Obozrenie*) a series of fourteen cases of various painful affections in which he used electric light as an anodyne, with almost "magical" results. The apparatus (devised by himself) used for the purpose consisted of a small-sized lamp, furnished with a suitable handle and a funnel-shaped reflector, varying from 3.5 to 6 centimeters in length and from 2 to 3 in the longest diameter, the lamp being fixed within the reflector. In cases where the head or neck was affected, the illumination (the reflector being applied directly to the painful area) lasted from ten to fifteen seconds; in other regions of the body from one to five minutes, or even longer, until the patient began to complain of intense heat. The anodyne effects are said to have been invariably most striking. A woman suffering from very obstinate intercostal neuralgia, after a single sitting (a series of illuminations, each of a few seconds' duration) was completely and permanently freed from pain. The same result was obtained in another patient suffering from intense rheumatic pains about the shoulder.

* This may be dangerous treatment, the remedy should be used as a gargle.—A. K. H.

Papain in Indigestion.—Dr. Grineritshi speaks highly of the use of papain in dyspeptic conditions characterized by an habitual failure of digestion, acid eructations, and by the painful symptoms of gastric fermentation (*Bull. Gén. de Therap.*). He administered 1 to 2 grains of papain mixed with 4 to 6 grains of sugar of milk. This dose is taken an hour or two after food in a tablespoonful of an alkaline mixture containing bicarbonate of sodium, carbonate of ammonia, carbolic acid and glycerine. Dr. Grineritshi states that the pain due to acid fermentation is by this treatment completely relieved, the excess of acid being neutralized as digestion proceeds. He considers that papain is without a rival as a digestive ferment, and reports the cure by its use of the most obstinate cases of chronic dyspepsia, even though associated with pain and with constipation.

Hyper-Alimentation and Water-Drinking as a Cure for Consumption.—Dr. W. H. Burt, of Chicago, has recently stated his belief that excessive eating and the excessive use of water will cure fifty per cent. of all consumptive cases in their first and second stages. He explained at length the tonic influence and power in building up tissue possessed by water, which forms three-fourths of the human body, and said that even in health six pints a day were necessary to meet the water waste, and in disease twelve pints.

The treatment he proposed consisted in the free use of water every hour of the day, nine hours sleep regularly, and, if possible, the sea or mountain air. Above all, the patient must look upon the drinking of water as his life.

Salicylate of Sodium for Pruritus.—*The Medical Record*, July 10, refers to a case, reported by Dr. Wertheimer, of a woman suffering from universal cutaneous pruritus of nervous origin, for the relief of which he tried salicylate of sodium in fifteen-grain doses three times a day. After the third dose she enjoyed the first night's undisturbed sleep she has had for a long time, and by the fourth day all itching had entirely ceased. Smaller doses were given for a few days longer, and she has since remained free from any return of pruritus.

Clinical Record of the Newer Antipyretics.—One point must be insisted upon (S. W. Moorhead, M. D., *Times and Register*, May 10, 1890) in the interest of clearness in view of what follows, namely, that increased heat and fever are not convertible terms. Elevation of temperature, it is true, is an essential pathological condition common to all fevers, but it is only one of many functional disturbances which are believed to be due to a common cause. In addition to rise of temperature, fever is characterized by alteration of the processes of innervation, circulation, secretion, nutrition, and tissue disintegration. Increased heat, in other words, is only a symptom or effect of the condition known as fever, which condition is manifested no less by coincident disturbance of the functions just named. If this view be correct, remedies which simply reduce temperature are not necessarily antifebrile remedies, and the term "antipyretic," as commonly used, is a misleading one. Were fever and elevation of temperature identical, reduction of temperature would mean cessation of the febrile process. But antithermics are not *per se* curative agents of fever; and an "antipyretic," so-called, is, or is not, an antifebrile remedy, according to whether it acts in opposition to fever, or only in opposition to increased temperature. Attention is called to this distinction at the outset, because of the conviction that in the treatment of fever attention should not be confined to the temperature alone, and that in making an estimate of the comparative value of the different so-called "antipyretics" regard should be had to their several effects upon the nervous, circulatory, nutritive and secretory systems, as well as upon the body heat. It is insisted, therefore, that the heat-reducing agent employed in a given in-

stance shall, if possible, be one which will neutralize or counteract the cause of the fever; or, if that be out of the question, one which will most favorably modify all the disturbances of function resulting therefrom; that whenever possible the antithermic shall also be a ferbifuge.

It is obvious that an increase in temperature must depend upon an increase in heat production, or lessened heat loss, or both combined. Antipyretics, accordingly, may be divided into two general classes: (1) Those which lessen the production of heat, and (2) those which promote the loss of heat. Some, as we shall see, act in both ways.

A lessened production of heat may be effected by interfering with tissue change (a) by altering the composition of the blood, and (b) by reducing the circulation. Examples of agents lessening tissue change by reason of their effect on the blood are quinine and other alkaloids of Peruvian bark, antipyrin, acetanilid, phenacetin, salicin, salicylic acid, and the salicylates, salol, carbolic, benzoic and picric acids, thallin, chinolin, hydroquinine, pyrocatechin, kairin, kairolin, resorcin, pheno-resorcin, berberin, alcohol, camphor, eucalyptol, thymol, and other essential oils. Many of these, in full doses, have also a depressant effect upon the heart and respiration.

Quinine, in antipyretic doses, interferes with the oxidation process in every part of the body. As an energetic protoplasmic poison, it diminishes the absolute number of white blood corpuscles by interfering with their formation. By lessening the affinity of these corpuscles for the oxygen of the hemoglobin, it retards their ameboid movements, and hinders their migration from the capillaries. Its action on the red corpuscles is to prevent them from taking up oxygen or ozone; to bind that which they already contain more closely to the hemoglobin, and to prevent them from giving it up to the tissues. Thus deprived of oxygen, oxidation in the tissues is necessarily imperfect, and the production of heat is lessened to a corresponding degree.

The action of antipyrin, acetanilid, salol, phenacetin, and the other members of the aromatic series of carbon compounds is similar to that of quinine, but not identical. They interfere with oxidation by producing important changes in the blood, different from those of the cinchona alkaloid. As a result of their administration, the red blood corpuscles are altered in form, and the hematin is separated from the other constituents. Owing to the lessening in quantity thus produced of the oxyhemoglobin, and the corresponding formation of methemoglobin, the oxidizing function of the blood is seriously impaired, and nitrogenous metamorphosis, with evolution of heat, diminished. The cyanosis and collapse sometimes witnessed are a result of the partial and temporary disintegration of the red blood globules produced by these agents. If the amount of the drug used be large, disorganization of the whole mass of the blood ensues, and that fluid assumes a chocolate tint.

Chief among the agents which act through the medium of the circulation are venesection, aconite, veratrum, antimonials, colchicum, trimethylamine, chloral large doses of quinine and digitalis. With the exception of the last named, these have a depressant action on the intercardiac motor ganglia, and vaso-motor and respiratory centres in the medulla. The force of the heart is consequently weakened, the arterioles are dilated, the blood-pressure lowered, and the respiratory movements lessened in depth and frequency. As a result, aeration of the blood is impeded, and less heat is generated. Aconite, veratrum and trimethylamine also contribute to this end, by slowing the heart through their action on the inhibitory apparatus; while antimony, in addition to its effect on the circulation of the blood, combines with the red blood corpuscles, lessening their oxidizing power. Digitalis strengthens as well as slows the heart, and stimulates the vaso-motors, with consequent rise of blood-pressure.

Loss of heat may be promoted in various ways. Dilata-

tion of the cutaneous vessels, by means of alcohol or the nitrites, increases the bulk of blood in the external cooling area, and thus produces increased radiation of heat. Some valuable experiments, recently performed, show that so great is the radiating power of the skin, that in health as much as 60 per cent. of the heat leaving the body does so by radiation.

Diaphoretics are another powerful means to the same end. To this class belongs some of the remedies which lessen tissue-change—notably, antipyrin, acetanilid, thalalin, kairin, kairolin, phenacetin and salicylate of sodium. Others have been enumerated above in the list of agents acting on the circulation, as aconite, veratrum and antimony. The diaphoretic group also includes the nitrites, Dover's powder, ammonium and potassium salts, jaborandi, warm drinks, the wet pack, vapor and Turkish baths. In addition to dilating the cutaneous vessels, allowing free radiation from the surface, diaphoretics cause a loss of heat due to the evaporation of the sweat. By the conversion of the water into aqueous vapor, a large amount of sensible heat is rendered latent, and the temperature of the body correspondingly reduced. When it is remembered that five and one-half times as much heat is required to convert boiling water into steam as is required to raise water from the freezing to the boiling point, the amount of heat abstracted from the body by the evaporation of the perspiration will be readily conceded to be very great. Inasmuch as during the active stage of fevers the cutaneous surface, as well as the mucous membrane lining the whole extent of the respiratory tract, is drier than natural, it is highly probable that the elevated temperature, in many cases, is due quite as much to lessened exhalation of aqueous vapor, and consequent retention and accumulation of heat in the body, as to increased activity of molecular changes in the tissues. Diaphoretics restore the lost balance between heat production and heat loss, and are, therefore, a rational, as well as a powerful means of reducing high temperature.

Diuretics, as well as diaphoretics, are true physiological antipyretics. The kidneys are the chief organs by which the system excretes the products of tissue change. In fever, the tendency is for them to become inactive, while at the same time the work required of them is increased. By the administration of diuretics their excretory activity is heightened, waste material resulting from the disintegration of nitro-genous tissue is eliminated, and the system rid of one of the chief elements in maintaining the febrile condition.

Still another method of increasing the loss of heat is its direct abstraction from the body by means of wet packing, cold sponging and tepid or cold baths. Ice and cold fluids taken into the body destroy or neutralize a certain amount of heat, and, in doing so, aid to reduce the body temperature. The application of cold in the treatment of febrile conditions dates back to antiquity, and is an effective, speedy and sensible plan of getting rid of superfluous heat. With proper precautions it is also one of the safest methods of combating fever. One great advantage which it possesses over the chemical antipyretics is, that it is an antifebrile remedy, while they are simply antithermic. The reduction of temperature is but one of the results of hydiatic treatment of fever. Its effects upon circulation, innervation, nutrition, tissue metamorphosis, and the other physiological functions which are disturbed by fever, are not less important than the lowering of the temperature. It is undeniably tonic to the nervous system, including the brain, and counteracts the muttering delirium, carphologia, and other evidences of nervous depression. It does not impair the oxygen-carrying power of the blood, nor is the composition of that fluid altered in any way, except as the result of improved digestion and assimilation of food, and an increased secretion of urine. It temporarily restores circulation and respiration approximately to the normal. As a result of the hydiatic treatment, the cardiac action

becomes stronger, slower and more regular; the tension of the blood-vessels is increased through stimulation of the vaso-motors; respiration is deepened and slowed; all the secretions are increased; appetite and digestion are improved; the whole system is refreshed and invigorated, and the patient fortified against the dangers of inanition and adynamia. It follows from this that a high temperature is not the principle, and by no means the only, indication for hydrotherapeutics in fever. All the physiological disturbances are favorably modified by it; the tendency to complications is lessened, and the chances of recovery promoted.

From the foregoing review of the manner in which the several classes of antipyretics produce their effects, some conclusions are possible as to the indications and contraindications for each. In the continued fevers which tend directly to debility or functional impairment—as the typhoid group—the chemical antipyretics should not be used, except, possibly, as a last resort. There are several reasons for this belief. Good authorities now hold that the elevation of temperature, when within the usual bounds of typhoid fever, not only does not endanger life, but may be a wholesome reaction against a *materies morbi*; that febrile heat is a sanative power by which the body consumes and destroys a virus or germ it could not directly eliminate. However this may be, it is indisputable that the deaths from typhus fever do not correspond absolutely to the height of the fever. Prof. Welch, of Johns Hopkins University, in his Cartwright lectures on the pathology of fever, has quite clearly shown, from both experimental and clinical data, that high temperature is not the chief determining cause of fatality in typhoid; that failure of the heart's power is less an effect of high temperature than of other concomitant conditions; that infection and ptomaine intoxication resulting from it are chiefly concerned in the production of fatty degeneration of the heart; that the disturbances of the sensorium, which constitute so prominent a part of the group of so-called typhoid symptoms, are also dependent, in a far higher degree, upon infection or intoxication, than upon the heightened temperature, and that the lessened perspiration, the renal disorders and the digestive disturbances—with the possible exception of constipation—are referable likewise to other causes. In these conclusions other eminent authorities coincide. The chemical antipyretics being simply antithermic, are therefore unnecessary in typhoid, except, perhaps, in very rare instances. Again, as is well known, the quality of the blood in typhoid is seriously impaired. Not only does it contain the products of tissue waste in abundance, but it is deficient in its nutritive and formative constituents. The red corpuscles are deficient in oxygen-carrying power, and are disposed to disintegrate. The antipyretics in question lessen the quantity of urine and the amount of urea, uric acid, sodium chloride, phosphoric and sulphuric acid excreted, thus favoring an accumulation of effete and toxic matter in the blood, and coincide with the disease in tending to destroy the red blood globules. They likewise coincide with the disease in their effects on the nervous system, and tend to the production of destructive parenchymatous changes in the liver and kidneys. Consequently, they are positively hurtful, as well as unnecessary, in typhoid. It is owing, no doubt, to the fact that the chemical antipyretics and the specific poison of typhoid have a like action upon the integrity of the red blood corpuscles and upon the kidneys, that toxic symptoms are developed more frequently from the administration of these agents in typhoid than in any other disease. Another objection to their use is the fact that succeeding the temporary fall produced by their action, the temperature frequently rises higher than before. It is not claimed for them, by any one, that they shorten the duration of the fever, while under their use the mortality—as shown by statistics—has markedly increased. Further

proof of their inutility and harmfulness in this disease would seem to be unnecessary. A careful review of their action and its effects must inevitably lead to the conclusion of Brand, that the only advantage to be derived from them in typhoid is, that the patient is able to die with a nearly normal temperature.

For reasons already stated, diuretics and hydro-therapeutics would seem to be preferable to other means in the treatment of grave cases of typhoid. Quinine does not favor the excretion of the effete products of the system, and unless a malarial element be present, it has little, if any, value in large doses, except to lower the temperature. If unabsorbed from the stomach, as sometimes happens when given in solid form for an antipyretic effect in typhoid, it passes down through the intestine, and is likely to increase diarrhoea by its irritant effect upon the ulcers present. When absorbed, it adds to the effects of the fever by its action on the blood, the heart, the respiratory and vaso-motor centers, and the sensorium.

Chloral, aconite, veratrum and antimony are too depressing to the heart.

It may be admitted that there are objections to sponging or the bath treatment, but they do not outweigh its advantages. Like all other powerful and valuable remedial measures, it requires the exercise of judgment in its use to adapt it to the condition of the patient and the stage of the disease. It is an annoyance to the patient, and is less convenient than the expectant plan of treatment, or the administration of the coal-tar products. Popular prejudice is also against it, but it is confidently believed that with clearer views of the pathology of typhoid and other adynamic diseases, and of the ends to be accomplished in their treatment, this plan will obtain more and more. With our present light on the subject, but one better thing can be suggested, to wit: a special antipyretic to antidote the specific cause. In the absence of this, sponging or the bath treatment must continue, for the present, at least, to yield the most triumphant results.

In the periodical group of fevers due to malaria, quinine, as all will admit, is the antipyretic *par excellence*. It is a positive antidote to the malarial miasm, and destroys or removes from the system the exciting cause of the disease. The cause having been removed, the resulting functional disturbances subside. Quinine is in such cases an antifebrile remedy as well as antithermic, and should be used to reduce high temperature caused by malarial miasmatic poison in preference to anything else.

High temperature due to rheumatism, is probably best controlled by the coal-tar derivatives. Their beneficial effects are seen not only in reduction of fever heat, but also in relief from the articular and muscular pains, and in subsidence of the local swelling. Statistics would seem to show that they do not materially shorten the disease, and therefore lack the specific power which quinine has over the paroxysms of ague, but they control better than any other antipyretics the manifestations of the disease, and contribute more largely to the comfort of the patient. Occasionally they fail to relieve hyperpyrexia, when quinine may be given or baths employed. In this disease the conjoined administration of alkaline diuretics, as all are aware, has a most salutary effect.

As compared with each other, salol stands first of the chemical antipyretics in point of safety. Though slower in its action than some of the others, it is quite as efficient in many cases, and produces less injurious after-effects. Antipyrin is prompt in action and less toxic than any of the others of equal power, except salol. Acetanilid more seriously affects the composition of the blood, and the same is true of phenacetin, which is closely allied from a chemical standpoint. Thallin, kairin, hydroquinone and resorcin should not be used. In small doses they exert a destructive influence on the red blood corpuscles, sufficient to condemn them, and in doses only slightly larger

than are sufficient to lower temperature they cause heart paralysis.

The initial high temperature of sthenic pneumonia is combated most promptly and effectively by venesection or a full dose of quinine. Both reduce and equalize the circulation, which is all-important at the outset. During the first stage, the condition of the pulse is a better guide for the administration of remedies than the thermometer. Quinine is to be preferred to aconite, veratrum and other heart depressants, at the beginning, because it acts more promptly when not a moment is to be lost, and because also of its effects on the movements and migration of white blood corpuscles. For the latter reason also it is to be preferred to the chemical antipyretics, which are destitute of such power. When given early enough, it is the common experience that a proportion of cases are aborted as a result.

At the beginning of local inflammations quinine given with or followed by aconite, veratrum or other cardiac or vaso-motor depressants, is admirably calculated to meet the pathological conditions present.

Fermentation in the intestinal canal is sometimes a cause of high temperature. In such cases salicylic acid, salol or naphthalin would seem to be specially indicated for reasons apparent to all.

If there is any agent capable of destroying or neutralizing the specific contagium of the eruptive fevers, it remains to be discovered. In its absence, the best method of reducing temperature, lessening excitability and restlessness, and promoting normal actions in the system, particularly in scarlatina and rubella, is the application of water to the surface of the body, with the administration of diuretics and diaphoretics internally. The chemical antipyretics produce no appreciable improvement aside from the reduction of the temperature; they cause retardation of the excretory functions; neither prevent nor modify the ordinary syndromes and complications of the eruptive diseases, and prolong rather than shorten their duration.

It is to be hoped that the time will come when we shall be able to combat each fever with directly specific weapons. Until then let us be careful to make as intelligent choice as possible of the means at our command. If we can not destroy or neutralize the cause of the disease, let us at least avoid hampering or disabling the system in its struggle for life.

Carbolic Plaster.—Carbolic plaster is a useful preparation, because, when applied, it moulds itself accurately to the part, excluding the air and bringing the medicament into intimate relation with the part to be healed. It does not dry and become rigid, as if made of putty, but remains soft and flexible for a long time.

It is made by mixing carbolate of glycerine with prepared chalk. Carbolic acid one part and glycerine four parts is the formula for carbolate of glycerine.

Of glycerine carbolate take thirty-four parts by weight, and of prepared chalk, ninety-four parts by weight. Mix well by kneading and keep in closely-stopped jars.

Cultivation of Vocal Music in the Schools as a Means of Preventing Phthisis.—In a paper read before the Virginia Medical Society (*Jour. Am. Med. Assn.*, Dec., 1889,) Dr. C. E. Busey states it as a well-known fact that those nations which are given to the culture of vocal music are strong, vigorous races, with broad, expansive chests. If an hour a day was devoted in our public schools to the development of vocal music, there would not be the sad spectacle of drooping, withered, hollow-chested, round-shouldered children. There is too great a tendency to sacrifice physical health upon the altar of learning. Vocal music is gymnastic exercise of the lungs, producing their increased expansion by development of the lung tissue

itself. The lungs in improved breeds of cattle, which naturally take little exercise and are domiciled much of the time, are considerably reduced in size when compared with those animals running at liberty; and so it is with the human race, whose lead inactive lives caused by civilization. Phthisis generally begins at the apices of the lungs because these parts are more inactive, and because the bronchial tubes are so arranged that they carry the inspired air with greater facility to the bases than to the apices. During inactivity a person will ordinarily breathe about 480 cubic inches of air per minute. If he will walk at the rate of six miles an hour, he will breathe 3,260 cubic inches. In singing, this increases more than in walking, as to sing well requires all of the capacity of the lungs. The instructor of vocal music, in addition to his musical education, should understand the anatomy and physiology of the respiratory organs.

A Strange Remedy for Hydrophobia.—The following extract from Haghenbeck's "Jahrbüchern der Verbreitung des Glaubens" (Missionary Annual), for 1890, appears in the *Köln Zeitung*:

Six months ago, while travelling my circuit in the northern part of Bengal, I put up at the house of a rich bunyari, whom I had baptized the winter before. It happened during this time that six or seven men, among whom were two of my bearers, were badly bitten by a rabid dog. I at once directed irons to be heated for cauterizing the wounds. The people stared at me, and said, laughing, "Why, sahib, it is nothing at all; we have an excellent preventive for the madness; you shall see." The dog came running back, upon which one of the bystanders took a stick and killed it on the spot. Another then opened the animal and tore out its liver, from which he cut pieces and gave one to each of the patients, who forthwith devoured them all raw and bleeding. "There is not the least danger now," they told me. As I could not believe them, and still insisted on cauterizing, they brought to me a man who had great scars on his legs, where he had been bitten five years before by a large dog. He had eaten a piece of the animal's liver, and experienced no bad results from the wounds. The occurrence I have related took place about the last of March, and now on the 3d of October (1889) the bites are healed and all these men continue perfectly well. What are we to think of such a remedy, and what would M. Pasteur say to it? The natives even claim that it is an infallible cure for fully developed hydrophobia.

Rotheln or Measles?—From an interesting paper by Dr. Charles W. Townsend, of Boston, in the *Archives of Pediatrics*, April, 1890, we extract the following conclusions:

- (1) Epidemics of measles occur in which many of the cases exactly resemble cases described as *rötheln*.
- (2) That these cases are also found occasionally in severe epidemics of measles.
- (3) That glandular swellings and sore throat are sometimes found in cases of undoubted measles and are sometimes absent in cases called *rötheln*.
- (4) That the symptomatology of *rötheln* is not distinct from that of measles.
- (5) That it is therefore impossible to make a diagnosis of *rötheln* from a single case.
- (6) That the only ground on which the individuality of *rötheln* rests, is the fact that previous attacks of measles afford no protection from this disease.
- (7) That as second attacks of measles do occasionally occur, we can not, from our present knowledge, make the diagnosis of *rötheln*, unless—as in the charterhouse and asylum epidemics—we meet with a series of cases in

patients, many or most of whom have previously had measles.

(8) That the impossibility of knowing how many second attacks may occur in a given epidemic of measles makes this proof of the separate existence of *rötheln* somewhat problematical, and gives rise to the question, is it possible that in some epidemics and not in others a mild form of measles attacks equally those who have had measles before and those who have not, and affords afterwards no protection from measles? In other words, is *rötheln* merely a mild form of measles?

Embalming.—The best process of embalming (*Santarian*) is called the "Brunelli Process." The circulatory system is cleansed by washing with cold water till it issues quite clear from the body. This may occupy from two to five hours. Alcohol is injected so as to take out as much water as possible. This occupies about a quarter of an hour. Ether is then injected to abstract the fatty matter. This occupies from two to ten hours. A strong solution of tannin is then injected. This occupies for imbibition from two to ten hours. The body is then dried in a current of warm air passed over heated chloride of calcium. This may occupy from two to five hours. The body is then perfectly preserved and resists decay.

Fluorescein in the Diagnosis of Lesions of the Cornea.

—In November of last year Dr. Straub, a Netherlands army surgeon, discovered the fact that a solution of fluorescein, when dropped upon any portion of the cornea which was deprived of the epithelium, would color this spot a deep green, and leave the rest of the cornea unchanged. In the *Johns Hopkins Hospital Bulletin* for April, 1890 (*Therap. Gaz.*), Dr. Randolph states that he has now performed over one hundred experiments in this connection in the eye clinics of the Johns Hopkins Hospital and the Presbyterian Eye and Ear Charity Hospital, which have led him to form positive conclusions. Fluorescein is a red powder, soluble in water, and belongs to that class of substances which are found as products of coal-tar distillation. Dr. Randolph employed a solution of ten grains of powder to the ounce of water, to which is added fifteen grains of the bicarbonate of sodium. Dr. Randolph states that although he has employed it in the most intense forms of corneal inflammation, it has never produced any irritating effects. The portions of the cornea stained retain the color from half an hour to several hours, while the solution does not produce the slightest effect upon the healthy cornea. Whenever there was an actual loss of substance, the coloration was more apparent, and it may, therefore, be concluded that as long as it is possible to color any portion of the cornea, we may be certain that some lesion still exists. Even in cases of slight excoriation, scarcely visible to even oblique illumination, every detail of the wound, and every minute point, where the epithelium had been removed, is clearly brought out by a drop of the fluorescein solution. In ulcers of the cornea, positive results were always obtained. In simple superficial keratitis the coloration was much less distinct than when this disease was associated with an ulcer. In parenchymatous keratitis the results were invariably negative. In three cases of iritis, uncomplicated with corneal trouble, Dr. Randolph failed to obtain any coloration. In two other cases of iritis as syphilitic origin where the cornea was involved, superficially as well as interstitially, marked coloration was observed. In glaucoma the result was negative.

The use of this substance is especially valuable in determining the presence of minute ulcers of the cornea in very young children, where the blepharospasm and photophobia are frequently so intense that the lids have to be forced apart in order to get a view of the eyeball, and then the latter is rolled about so continuously and th-

cornea flits so rapidly before our eyes, that we are obliged to simply infer from the attendant symptoms the nature of the trouble without actually seeing the lesion itself; a drop of the solution will locate the disease and its extent, and bring it out distinctly, so that it can be seen no matter how fast the eyeball moves about. In foreign bodies in the cornea, no matter how small the foreign substance may be, its position and size can be located to a nicety. The coloration is here distinct, showing itself by a green ring just around the foreign body.

A Rapid Method of Cure of Hepatic Abscess.—Dr. Vaughan Harley (*Medical Press and Circular*, April 30, 1890), after enumerating the clinical and pathological facts concerned in hepatic abscess, claims, as a natural corollary to these facts, that so soon as the existence of purulent matter in the liver is detected, it should be evacuated, and the sooner it is done the better will be the patient's chances of recovery.

The presence of pus being suspected, its exact situation should be prospected in the following manner: An eight-inch long fine exploring trocar is to be passed into the liver obliquely from right to left, or *vice versa*, according to the site the abscess is thought to occupy. Then slowly withdraw the instrument, so as to allow sufficient time for a drop of pus to appear at its orifice. If pus be found, its situation and depth in the organ should be carefully noted. If blood instead of pus flow, the bleeding ought to be encouraged. For in cases of suspected hepatic abscess there is always more or less congestion, and marked benefit is likely to arise from a free hepatic phlebotomy.

The presence of pus having been substantiated, before withdrawing the exploring canula allow as much as possible of the purulent liquid to flow from it. Immediately on its ceasing to flow through the narrow tube, introduce, in exactly the same direction and to precisely the same depth, a canula of the diameter of a No. 8 or No. 10-sized English catheter, and through it empty the abscess completely by means of an aspirator. When empty, wash the cavity out with tepid water containing ten grains of boracic acid to the ounce, and continue to do so until the liquid returns clear and colorless. Then insert as large a sized silk elastic catheter as will pass through the canula into the abscess cavity, and, on withdrawing the canula, cut off the extruding end of the catheter to within one and a half inches of the opening in the abdominal wall, and securely fasten it there.

This done, cover the whole with a hot, sloppy, linseed poultice.

The abscess cavity should be washed out with boracic acid solution night and morning, and poultices constantly applied until the purulent discharge almost entirely ceases.

If, however, as occasionally happens, the cavity refills, another opening is to be made at a short distance from the first, and a second drainage-tube introduced. This counter-opening, by facilitating the washing-out process, greatly hastens the cure.

The advantages of this mode of treatment are illustrated by the reports of two most unfavorable cases, the first being one in which the patient nearly died from blood-poisoning in consequence of the absorption into the circulation of poisonous pus; second, of a multiple abscess occurring in a greatly-enlarged liver of a strumous patient. Both of these cases, in spite of their unfavorable nature, made exceptionally rapid recoveries. The extreme success in these cases Dr. Harley attributes to the following facts: First, in the employment of boracic acid we have not only a thoroughly safe antiseptic agent, but the great advantage which accrues from the use of one free from the objection of coagulating the albuminoids in the pus, and thereby inducing a fouling of the instruments, such as is unfortunately the case with carbolic acid and most other antiseptic preparations. Secondly, the daily washing out

of the abscess cavity with boracic acid solution not only expedites the healing process, by keeping it clean, but has the further advantage of rendering it quite unnecessary to take any precautions against the intrusion of air into the cavity, no matter how large it is. Thirdly, the washing out of the cavity with boracic solution, from its enabling us to get rid of all the purulent matter, thick as well as thin, does entirely away with the necessity of making a large opening either through the abdominal walls or into the liver tissues with a knife or other instrument, a point of no mean moment, seeing that it is a well recognized surgical axiom that the smaller the breach of continuity in any animal tissue, no matter whether it has been made accidentally or intentionally (other things being equal), the proportionally quicker is the healing process.

Lysol—A New Antiseptic.—This, according to Dr. Gerlach (*Zeitschrift Der Aertze in Wien*) is a coal-tar prepared, by boiling, from oil of tar, alkaline fat, resinous acid and resin. It contains no phenol, but abounds in creosol. Its consistency is that of soft soap; it is easily soluble in water, and possesses the following advantages: 1. As a germicide, lysol is superior to both creolin and carbolic acid, and is effectual in all stages of bacterial growth. 2. It is less poisonous than the above mentioned agents. 3. Lysol is not a proprietary article, and is constant in its composition. 4. Lysol is very cheap when compared with creolin or carbolic acid. Being readily soluble in water, it is not only a good disinfectant, but may be employed medicinally, whenever an antiseptic or aseptic operation is desired, without any risk of poisoning. For surgical purposes a one per cent., for washing out the uterus a one-half per cent. solution should be used.

Leprosy Apparently Cured.—Dr. Geo. H. Fox, in a paper read before the Medical Society of the State of New York (*Druggist's Circular*) reports a case of leprosy which has been apparently cured by the use of chaulmoogra oil. The patient came to this city from the Sandwich Islands in 1883. For nearly two years previous he had noticed symptoms of the disease. For three months he was given nuxvomica in full doses, with other internal remedies, while chrysarobin was applied locally. The cutaneous lesions became better and worse again, seeming to increase by periodical attacks. The treatment pursued was of doubtful benefit. In June the patient entered the Skin and Cancer Hospital and was given chaulmoogra oil in doses gradually increased from fifteen to sixty drops daily. This was well tolerated by the stomach and apparently productive of benefit. There was a disappearance of some of the patches, increased mobility of the fingers, and improvement in the general condition of the patient. The patient expressed a strong belief that the disease was checked and that he was going to get well, a result for which the physician was only able to hope. About the middle of July, he left the hospital and settled in California, continuing the treatment and reporting to the physician at stated intervals. He grew slightly worse, then better again, and so his condition alternated for more than a year. He continued to use the oil faithfully, although at some times it was somewhat unpalatable, and he had noticed a marked difference in the quality of oil from different firms. In October, 1885, he wrote: "There have been no more symptoms of the disease in any shape. I have enjoyed almost perfect health in every way, and were it not that I still have numbness in my hands, I would not believe that there could be anything the matter with me. I take about a hundred drops of the oil daily, and it does not seem in any way to disagree with me." In December, 1887, he wrote: "I have taken no medicine of any kind for about two years, and have had no unfavorable symptoms during that time. There has been no sign of any blisters or spots returning, and were it not for the numbness I still feel, I would truly

say I am as well as I ever was in my life." In November, 1889, he reported himself as being quite as well as when he last wrote. In commenting on this case, the author says: "A doubt might be reasonably entertained as to the perfect cure of the disease, on account of the numbness and deformity of the fingers which still exist; but this condition should be considered as one of the unfortunate results of the disease rather than one of its symptoms. Not having had an opportunity to examine this patient recently in person, I can not speak as to his exact condition. Another interesting point arises in connection with this case as to the relative importance of medicinal treatment and a change of climate. I am inclined to attach the most importance to the latter. It may seem difficult to explain why a disease depending upon micro-organisms should be benefited by external agencies, but the benefit to lepers resulting from a change of climate has been too frequently noted to admit of doubt. The effect of chaulmoogra oil in lessening the symptoms of the disease I have noted in several other cases of leprosy which have been under my care, and I regard it as beyond all question, the most efficacious remedy which has been employed in the treatment of this disease. The fact that it has failed to effect a cure in many cases, and has been pronounced of little or no value by those who have had opportunities of testing its virtues in the large lazarettos, is an argument of little weight against its efficacy. When a man affected with leprosy is taken from his home and friends, pronounced unclean, immured in a lazaretto with many loathsome fellow-sufferers, and given to understand, as is usually the case, that death is the only portal of escape open to him, the impression upon his mind is such as to counteract the effect of all remedies, and under such circumstances nothing short of a miracle could be expected to effect a cure of leprosy."

Pain Following Cocaine Anesthesia.—Dr. S. S. Jones (*Med. Record*) believes that many disagreeable symptoms following operations on the nasal tissues are due to cocaine. He writes: "In my own hands I have often found the temporary anesthesia too dearly bought by an intense pain, lasting for hours, or even days, and which I could only account for as being due to the anesthetic. In one case the application of a four per cent. solution to the uvula was followed by a most intense pain in the palate and teeth, which lasted for two or three days, and which the patient described as resembling the pain of a frozen member thawing out. In a cervix operation there was more pain following, and lasting for several days, than I had ever experienced before or have encountered since. In cases, too, operated upon by rhinologists, to whom they had been referred by me, the after-pain has seemed to me to have been so out of proportion to the extent of the operative procedure that I have been forced to explain it upon some other hypothesis; and I feel quite convinced that much of the suffering following operations upon the nose is due to the cocaine applied as an anesthetic. That in many cases cocaine may be used with impunity is, no doubt, true; but there are, I am certain, many whose nervous systems are profoundly impressed by it, and whose sensory nerves take their innings, after an enforced idleness, with a cruel intensity."

Fatigue and Susceptibility to Infectious Disease.—Drs. Charrin and Roger (*Revue Scientifique*) have endeavored to afford experimental confirmation of the generally received view that physical fatigue is a powerful factor in the production of infectious disease. They subjected a number of white rats to severe exercise (running in a rotating cage) for four consecutive days, for seven hours each day. Eight of these tired-out animals were then inoculated with attenuated anthrax virus, four animals in a normal condition of health being inoculated with the same virus at the same time, in order to serve as a stand-

ard of comparison. The result was, that seven of the eight animals belonging to the first series succumbed, while all the animals of the second series survived. The authors thus explain the curious tendency of epidemics to break out among soldiers during great manœuvres and on campaign, and they urge that many a soldier is rendered susceptible to disease by fatigue who would otherwise have escaped.

Glycerinum Saponatum.—Dr. Hebra highly recommends saponated glycerine as a vehicle for prescribing medicine. This preparation is an alkaline fat obtained in the manufacturing of soap, which is dried, then cut into small pieces, and dissolved in glycerine. This product is again heated and filtered, and allowed to cool, when it forms a soft, yellow, transparent, and somewhat elastic mass, which is perfectly colorless, melting at body heat, and easily soluble in water. Hebra asserts that an ointment composed of 90 per cent. of glycerinum saponatum, combined with 5 per cent. of salicylic acid, and 5 per cent. of creosote, will cure that intractable disorder, lupus, without causing the slightest pain. He also assures us that there is no other remedy so powerful as a bactericide.

Window-Pane Barometer.—A pretty use of cobalt and nickel salts, which, as is well known, are affected by changes in the amount of moisture in the air, and which change they indicate by exhibiting different colors, is suggested by Rueckert in the *Rep. Annal. Chim.* if window-panes, or wall-paper, or the like, are painted with the following solutions: 1. Chloride cobalt, 1; gelatin, 10, and water, 100. 2. Chloride copper, 1; gelatin, 10, and water, 100. 3. Chloride cobalt, 1; gelatin, 20; water, 200; nickel oxide, 0.75; chloride copper, 0.25; they will be colorless in damp weather. In clear weather, solution No. 1 will give blue color, No. 2, yellow, and No. 3, green.

Transparent Cement.—A French authority gives the following recipe for transparent cement, especially adapted for china and porcelain. The advantage claimed is absence of the slightest yellow tinge, so that the addition of the cement is imperceptible, while it possesses an extreme degree of tenacity.

Mix in a well-stoppered bottle ten drachms of chloroform with twelve and one-half drachms of non-vulcanized caoutchouc in small pieces. The solution is easily effected, and, when finished, add two and one-half drachms of mastic, and let the whole macerate from eight to ten days, shaking the mixture from time to time, but without heat. A perfectly white and very adhesive cement is thus produced. This compound is made on the same principle as the cement greatly in vogue among florists for making permanent bouquets.

Treatment of Nævi.—The following is recommended in the *Pharm. Zeitung*: one part tartar, stibiat. pulv. is made into a paste with four parts emplastr. saponat., and a layer of the same one line in thickness applied to the nevus, over which it is fastened by strips of adhesive paper. In four or five days either a cutaneous eruption appears or supuration sets in, and a few days later only a blackish scar is left on the site of the nevus.

Boiling Points of Potassium and Sodium.—Mr. Perman has, according to the *Athenæum* (*Br. and Col. Drug.*), satisfactorily accomplished the difficult feat of determining the boiling points of potassium and sodium. The metals were boiled in a hollow iron ball, surrounded by a screen of fire-clay and heated with one of Fletcher's blow-pipes; the temperature was found in each case by means of an air thermometer, consisting of a glass bulb with a capillary stem, which was lowered into the vapor of the boiling

metal, sealed, and broken open under water, the temperature being then calculated from the volume of water entering the bulb in the usual way. The mean results gave 742 as the boiling point of sodium, and 667 as that of potassium, the figure for sodium being more trustworthy than that for potassium on account of the smaller amount of the latter metal employed.

A Substitute for Premature Delivery (*Canada Lancet*).

—There are few general practitioners who have not found it necessary to bring on premature labor in cases of moderately narrowed pelvis. The idea of never being able to bear a living child is one that weighs heavily upon the unhappy subject of such malformation as will prevent the proper fruition of the marriage contract. The stigma attached to such incompetency is felt keenly by all right-minded women, and the attending physician is oftentimes worried by both wife and husband to bring on premature labor, and yet try to so gauge the time that a viable child may be born to them. This is a proceeding which, though often necessary, can never be undertaken without some hesitancy on the part of the attendant. Caesarean section is as yet, notwithstanding the freedom displayed by laparotomists in exploring the abdomen, too dangerous a procedure to tempt either parent or surgeon to permit gestation to go on to full term, knowing that a living child can not be born by the natural outlet. We have noticed from time to time methods pursued, in the feeding of parturient women with the avowed object of rendering the bony structures of the child more yielding, so that the head would be more easily moulded and expelled. Not much attention has been paid to such measures in this country, and, indeed, to the ordinary medical mind, the idea seems rather far-fetched, and not exactly scientific.

Lately, however, some attention has been paid to this subject in Germany. T. Prochownik, of Hamburg, has been working in this line, and now lays down (*Deutsch. Med. Zeit.*) a dietary for such cases. His idea is that the child should be as free as possible from adipose tissue, yet still strong and well developed. By this method he has been able to bring to a successful termination, at full term, three pregnancies, although the pelvis was in each case very narrow. The children were strong and fully matured, but of very light weight. We regret that the actual measurements of the pelves spoken of are not given. It seems certain, however, that ordinary children could not have been born in either of the three cases.

The diet, which was carried out for about six weeks preceding the time of the expected confinement, was as follows: Breakfast—A small cup of coffee, with a one-ounce roll; Dinner—Any kind of meat, eggs, fish with but little sauce, a little "greens," cheese; Supper—About the same list as for dinner, with the addition of one and one-half to two ounces of bread, with butter as desired.

The following are forbidden: water, soup, potatoes, starchy foods, sugar and beer. For drink the patient is allowed from ten to fourteen ounces of red or Moselle wine daily. In this manner, which demands only a little strength of will on the part of the mother, the author hopes to obtain mature, healthy children, possessing some stock of resistance, in cases where the induction of premature labor would be otherwise unavoidable. Besides the general lack of adipose tissue in the three children mentioned, it was found that the cranial bones were more easily compressible beneath the thin and wrinkled scalp, and on this account the progress of the labor was rendered more favorable both for mother and child. After birth the emaciated appearance of the child was rapidly dissipated by the formation of the normal layer of fat.

Thumb Sucking.—Mr. S. O. Eades (*Brit. Med. Journal*) disputes the notion that thumb sucking is injurious. He says: "I always advise parents to encourage this habit,

especially during dentition. Sucking the thumb causes the salivary glands to pour out their secretion, thus moistening the mouth and aiding digestion; the pressure of the thumb eases, while the teeth are breeding, the irritation and pain of the gums, and helps, when the teeth are sufficiently advanced, to bring them through. Sucking the thumb, moreover, makes a cross infant contented and happy, and frequently induces a restless babe to fall into a sweet, refreshing sleep. After dentition is completed it is likely to become a habit with a child; in that case it may be easily cured by smearing its thumb with a paste of aloes and water; one or two applications will suffice, as after tasting the bitter it will eschew its former enjoyment. I may add that thumb sucking, in my opinion, is far preferable to ivory, India rubber rings, nipples, etc., we see so frequently given to these poor mortals by their loving mothers."

To Stop the Secretion of Milk.—Dissolve one-half ounce camphor in twelve ounces of turpentine, and apply to the breasts when desiring to stop the secretion of milk.

Palatable Meat Food.—As long ago as 1874, Yvon suggested the following method of preparing a palatable meat food: Take of raw meat (fillet of beef), 250 parts; of charred sweet almonds, 75 parts; of bitter almonds, 50 parts; of white sugar, 80 parts. Rub slowly in a mortar until a homogeneous paste is obtained, adding from time to time a sufficient quantity of water to give a proper consistency for a semi-solid or a liquid mixture. In the liquid preparation the meat will settle after awhile, but may be dispersed through it by shaking. The preparation may be preserved for a long time if bottled and kept in a cool place, and its nutritious character may be enhanced by adding to it the yolks of one or more eggs.

Gastrosocopy.—Dr. Embren, of this city, making use of the idea involved in Valtolini's larynx illuminator, has constructed an electric gastroscope. The instrument was demonstrated at a recent meeting of the Clinical Society. The essential part of the instrument is a small Edison incandescent light fastened to the distal end of a stomach tube. The lamp is introduced into the cavity of the stomach before the electric current is turned on. In a darkened room the size of the stomach and any gross anatomical changes in its anterior wall can readily be distinguished through the parietes of the body.

Oxyuris Vermicularis.—The oxyuris vermicularis is said to promptly disappear with injections *per rectum* of cod liver oil, pure or made into an emulsion with the yolk of an egg. It is non-irritating, and is said never to have failed to effect a cure.

Errata.—On page 273, second line, Dr. Otto Fülgraff's article, "eyes" should read *nose*. Same page, twenty-second line, "teaspoonful" should be *cupful*.

Dr. Geo. T. Stewart, chief of Staff of the W. I. Hospital, reports 711 patients treated during November, with a death rate of 2.95 per cent.

The House Staff is now full, but there will be four vacancies May 1, 1891. Candidates should apply to Dr. Alfred K. Hills, Chairman Committee on Examinations, 465 Fifth Ave.

The Committee on Inspection report as to a recent examination of the institution, "we were more than gratified with the condition of things, especially the very great cleanliness and neatness of every part. We find that great improvements have been made in the sanitary arrangements. We were informed that requisition has been made for a large number of traps for the drainage pipes with a view to most perfect sanitation."

MISCELLANY.

—Dr. W. S. Gee, of Chicago, who died recently, and was one of the editors of the "Medical Advance," is said by the "Medical Standard" to have been "a great advocate of the hypodermic use of morphine." Shades of Hahnemann!

—Researches by Dr. Newton, published in the *Medical News*, prove that milk, warm from the cow, when placed in tight cans in a warm atmosphere, will so change as to develop a substance which will cause poisonous symptoms in those using the milk.

—The Incas of Peru were under religious obligations to marry their eldest sisters, and these unions gave birth to a line of twelve princes, all equally remarkable for prowess, vigor and ability.

—Duke Charles Theodore, of Bavaria, has just concluded what this hard working prince calls a holiday. During a four week's vacation in the Tyrol, the duke treated all the poor peasants who flocked to him. This royal oculist in this way did fifty-three operations for cataract and one hundred and seventeen minor operations.

—A drug store clerk (*American Homoeopathist*): If I should be asked what was the best substitute for quinine, I should say onions. Time and again the sleep-producing virtues of the loud-smelling onion have been sung, but comparatively few know how valuable it is as a cure for chills and ague. Several customers explain their boycott on quinine by saying onions are cheaper and quite as effective, and one man in particular, who was a martyr to malaria for years, has been another being since he acquired the habit of chewing onion peel. The onion is used frequently to cure rheumatism with varying success, but I have never heard of its failing when persevered in as a remedy for malaria or chills.

—A burning taper uncovered for a single instant, during which it does not lose power amounting to the 1,000th part of a grain, would fill with light a sphere four miles in diameter, so as to be visible from every part of the compass.

—Sir Erasmus Wilson gives these directions for washing the face: Fill your basin about two-thirds full of fresh water, dip your face in the water, then your hands. Soap the hands well and pass them with gentle friction over the whole face. Then dip the face in the water a second time and rinse it thoroughly. A second basin ready with fresh water is a valuable addition. Rain or distilled water, owing to their purity and softness, are best for washing the face.

—A dental scientist is quoted as authority for the statement that caries of the teeth is due to a contagious germ and can be easily contracted by kissing.

—Doctor Gibier says that many persons have been deceived by the contractions of a dog's throat muscles in hydrophobia and thinking to extract a bone caught in the throat have been bitten.

—Kate Field has been examining some statistics and finds, to her horror, that American women spend about \$62,000,000 a year for cosmetics, most of which are made of zinc oxide, of corrosive sublimate and other poisons. This leads her to ask this pertinent question: How can women, vain enough to paint and dye their hair, bring forth children stalwart enough to resist temptations that lead to all manner of vice, including drunkenness?

—Cornelius Vanderbilt and his mother are about to build a "People's Palace" in New York. It will be modelled upon the institution bearing that name in London, and will cost \$250,000. It will contain departments for technical and industrial education, mission schools, food and shelter, gymnastics, libraries, etc.

—In every teaspoonful of human blood there are 15,000,000,000 of red corpuscles, but only 30,000,000 of white ones.

—In the University of Coimbra, Portugal, fourteen years study are now required to obtain the degree of M. D., six being spent in obtaining an ordinary education, three in a preliminary scientific course and five in purely medical studies. Now the students complain because the final examination is conducted in Greek!

—Experiments at Leipsic show that skin grafted from a white to a colored person becomes gradually black, and that black skin grafted upon a white person in time becomes white.

—The Supreme Court of Georgia has decided that the proprietor of a patent medicine is liable for damages for the injury done to any person who takes the medicine according to directions.

—A young woman has died at Lille from the effects of cocaine injected into her gums by a dentist.

—A curious use of salol as a diagnostic agent is made by Pal, of Vienna. Acid compounds of phenol are broken up by the secretions of the pancreas and of any other part of the intestinal canal, except the stomach. If, then, salol be given, and the urine responds to the tests for salicylic acid, the salol has passed the pyloric orifice. In two cases where this reaction was not given, occlusion of the pylorus was diagnosed and this was confirmed by the autopsy.

—Dr. Lassar, Secretary of the Tenth International Medical Congress, ran away from Berlin to escape the consequences of treating the empress badly while conducting her through the exhibition. It is also said that his official statements were incorrect. Lastly he is said to be insane.

—Pancoast holds that as men are made drunk sooner when standing or sitting while taking alcohol than when in a recumbent posture, in like manner it takes less ether to produce anaesthesia if the patient sits up.

—The average duration of life is greater in Norway than in any other European country.

—No kissing ever occurs in Japan excepting in the marital embrace, not even between a mother and her child, nor shaking of hands in salutation. If one were to offer a kiss to a Japanese maiden, she would think she was going to be bitten!

—A woman living in the mountains near Fort Smith, Ark., named Sarah Gates, aged seventy-one years, proved herself almost a second Sarah by giving birth to a well-formed and healthy male child. Two years ago, Mrs. Gates, then a widow, married William Gates, a young hired hand on her farm. The case is exciting a good deal of interest among physicians.

—Kuestner says that the best female catheter is a simple glass tube, open at the ends.

—Dr. Willard Parker, not less eminent as a sanitarian than as a surgeon, was so impressed with the belief that the daily watering of the streets increased the foulness and insalubrity of the atmosphere, that he gave orders to arrest any one who should be seen sprinkling the street in front of his residence.

—Dr. Charles T. Bean died at Chelsea, Mass., of pneumonia. He weighed 504 pounds.

—According to *Medical Classics*, the use of meat in summer causes more diarrhoea than fruits; the meat spoils quickly in hot weather, and acts as an emetic or a purgative.

—A woman living near East Dubuque, Illinois, has given birth to a child without eyes and with no place in the head for them. The forehead extends down to the nose perfectly smooth. Physicians say the child will live.